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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 20-F**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934**

for the fiscal year ended December 31, 2015  
Commission File Number 0-99

**PETRÓLEOS MEXICANOS**

(Exact name of registrant as specified in its charter)

**Mexican Petroleum**  
(Translation of registrant's name into English)

**United Mexican States**  
(Jurisdiction of incorporation or organization)

**Avenida Marina Nacional No. 329**

**Colonia Verónica Anzures**

**11300 Ciudad de México, México**

(Address of principal executive offices)

**Julio Alberto Valle Pereña**

**(5255) 1944 9700**

**ri@pemex.com**

**Avenida Marina Nacional No. 329**

**Torre Ejecutiva Piso 38 Colonia Verónica Anzures**

**11300 Ciudad de México, México**

(Name, telephone, e-mail and/or facsimile number  
and address of company contact person)

Securities registered or to be registered pursuant to Section 12(b) of the Act. None  
Securities registered or to be registered pursuant to Section 12(g) of the Act. None  
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

Title of Each Class

3.500% Notes due 2018  
Floating Rate Notes due 2018  
9 1/4% Guaranteed Bonds due 2018  
8.00% Guaranteed Notes due 2019  
6.000% Notes due 2020  
4.875% Notes due 2022  
3.500% Notes due 2023  
4.875% Notes due 2024  
4.500% Notes due 2026  
9.50% Guaranteed Bonds due 2027  
6.625% Guaranteed Bonds due 2038  
5.50% Bonds due 2044  
5.625% Bonds due 2046  
9 1/4% Global Guaranteed Bonds due 2018  
5.75% Guaranteed Notes due 2018  
3.125% Notes due 2019  
3.500% Notes due 2020  
5.50% Notes due 2021  
8.625% Bonds due 2022  
8.625% Guaranteed Bonds due 2023  
4.250% Notes due 2025  
9.50% Global Guaranteed Bonds due 2027  
6.625% Guaranteed Bonds due 2035  
6.500% Bonds due 2041  
6.375% Bonds due 2045

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

**Yes " No "**

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

**Yes " No "**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

**Yes " No "**

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

N/A

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**

accelerated filer” in Rule 12b-2 of the Exchange Act. (Check one):

**Large accelerated filer**   **Accelerated filer**   **Non-accelerated filer** ;

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

**U.S. GAAP**   ☐

**IFRS as issued by the IASB** ;

**Other**   ☐

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

**Item 17**   ☐   **Item 18**   ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

**Yes**   ☐   **No** ;

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Petróleos Mexicanos and its seven subsidiary entities, which we refer to as the subsidiary entities, *Pemex Exploración y Producción* (Pemex Exploration and Production), *Pemex Transformación Industrial* (Pemex Industrial Transformation), *Pemex Perforación y Servicios* (Pemex Drilling and Services), *Pemex Logística* (Pemex Logistics), *Pemex Cogeneración y Servicios* (Pemex Cogeneration and Services), *Pemex Fertilizantes* (Pemex Fertilizers) and *Pemex Etileno* (Pemex Ethylene), comprise the state oil and gas company of the United Mexican States, which we refer to as Mexico. Petróleos Mexicanos is a productive state-owned company of the Federal Government of Mexico, which we refer to as the Mexican Government, and each of the subsidiary entities is a productive state-owned subsidiary of Mexico. Each of Petróleos Mexicanos and the subsidiary entities is a legal entity empowered to own property and carry on business in its own name. In addition, a number of subsidiary companies that are defined in Note 1 and listed in Note 4 to our consolidated financial statements incorporated in Item 18, which we refer to as our subsidiary companies, are incorporated into the consolidated financial statements; these subsidiary companies are also identified with their corresponding ownership percentages in “Consolidated Structure of PEMEX” on page 4. As further described under “Item 4—Information on the Company—History and Development—Corporate Reorganization,” the seven new subsidiary entities assumed, on or prior to, November 1, 2015, all of the rights and obligations of the prior subsidiary entities of Petróleos Mexicanos—*Pemex-Exploración y Producción* (Pemex-Exploration and Production), *Pemex-Refinación* (Pemex-Refining), *Pemex-Gas y Petroquímica Básica* (Pemex-Gas and Basic Petrochemicals) and *Pemex-Petroquímica* (Pemex-Petrochemicals). References to the subsidiary entities prior to this corporate reorganization refer to Pemex-Exploration and Production, Pemex-Refining, Pemex-Gas and Basic Petrochemicals and Pemex-Petrochemicals. Petróleos Mexicanos, the subsidiary entities and the subsidiary companies are collectively referred to as “PEMEX” or “we.” See “Item 4—Information on the Company—History and Development—Recent Energy Reform” for more details.

References herein to “U.S. \$,” “\$,” “U.S. dollars” or “dollars” are to United States dollars. References herein to “pesos” or “Ps.” are to the legal currency of Mexico. References herein to “euros” or “€” are to the legal currency of the European Economic and Monetary Union. References herein to “pounds” or “£” are to the legal currency of the United Kingdom. References herein to “Swiss francs” or “CHF” are to the legal currency of the Swiss Confederation. References herein to “Japanese yen” or “¥” are to the legal currency of Japan. References herein to “Australian dollars” or “AUD” are to the legal currency of Australia. The term “billion” as used herein means one thousand million.

Our consolidated financial statements included in this annual report were prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. We refer in this report to “International Financial Reporting Standards as issued by the International Accounting Standards Board” as IFRS. In addition, these financial statements were audited in accordance with the International Standards on Auditing, as required by the *Ley del Mercado de Valores* (Securities Market Law) and the *Disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado de valores* (General Provisions applicable to issuers of securities and other participants in the securities market) in each case, of Mexico, for purposes of filing with the *Comisión Nacional Bancaria y de Valores* (National Banking and Securities Commission, or the CNBV) and the *Bolsa Mexicana de Valores, S.A.B. de C.V.* (Mexican Stock Exchange, or the BMV), and in accordance with the standards of the Public Company Accounting Oversight Board (United States), or PCAOB, for purposes of filings with the U.S. Securities and Exchange Commission, or the SEC.

The regulations of the SEC do not require foreign private issuers that prepare their financial statements on the basis of IFRS to reconcile such financial statements to United States Generally Accepted Accounting Principles, which we refer to as U.S. GAAP. Accordingly, while we have in the past reconciled our consolidated financial statements prepared in accordance with *Normas de Información Financiera Mexicanas* (Mexican Financial Reporting Standards, or Mexican FRS) to U.S. GAAP, those reconciliations are no longer presented in our filings with the SEC. We do, however, continue to provide the disclosure required under the U.S. Financial Accounting Standards Board Accounting Standards Codification (ASC) Topic 932 “Extractive Activities—Oil and Gas” (which we refer to as ASC Topic 932), as this is required regardless of the basis of accounting on which we prepare our financial statements.

We maintain our consolidated financial statements and accounting records in pesos. Unless otherwise indicated, we have translated all peso amounts to U.S. dollars in this Form 20-F, including all convenience translations of our consolidated financial statements included herein, at an exchange rate of Ps. 17.2065 = U.S. \$1.00, which is the exchange rate that the *Secretaría de Hacienda y Crédito Público* (Ministry of Finance and Public Credit) instructed us to use on December 31, 2015.

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You should not construe these translations from pesos into dollars as actually representing such U.S. dollar amounts or meaning that you could convert such amounts into U.S. dollars at the rates indicated. Mexico has a free market for foreign exchange, and the Mexican Government allows the peso to float freely against the U.S. dollar. There can be no assurance that the Mexican Government will maintain its current policies with regard to the peso or that the peso will not depreciate or appreciate significantly in the future. Due to the volatility of the peso/U.S. dollar exchange rate, the exchange rate on any date subsequent to the date hereof could be materially different from the rate indicated above. See “Item 3—Key Information—Exchange Rates” for information regarding the rates of exchange between pesos and U.S. dollars.

## **PRESENTATION OF INFORMATION CONCERNING RESERVES**

The proved hydrocarbon reserves included in this report for the year ended December 31, 2015 are those that we have the right to extract and sell based on the Mexican Government’s assignments to us in August 2014 through the process commonly referred to as Round Zero. See “Item 4—Information on the Company—History and Development—Recent Energy Reform” for a description of the Round Zero process.

The estimates of our proved reserves of crude oil and natural gas for the five years ended December 31, 2015 included in this report have been calculated according to the technical definitions required by the SEC. DeGolyer and MacNaughton, Netherland, Sewell International, S. de R.L. de C.V. (which we refer to as Netherland Sewell) and Ryder Scott Company, L.P. (which we refer to as Ryder Scott) conducted reserves audits of our estimates of our proved hydrocarbon reserves as of December 31, 2015 or January 1, 2016, as applicable. All reserves estimates involve some degree of uncertainty. For a description of the risks relating to reserves and reserves estimates, see “Item 3—Key Information—Risk Factors—Risk Factors Related to our Relationship with the Mexican Government—Information on Mexico’s hydrocarbon reserves is based on estimates, which are uncertain and subject to revisions.” “—We must make significant capital expenditures to maintain our current production levels, and to maintain, as well as increase, the proved hydrocarbon reserves assigned to us by the Mexican Government. Reductions in our income, adjustments to our capital expenditures budget and our inability to obtain financing may limit our ability to make capital investments” and “—The Mexican nation, not us, owns the hydrocarbon reserves located in Mexico and our right to continue to extract these reserves is subject to the approval of the Ministry of Energy.”

## **FORWARD-LOOKING STATEMENTS**

This Form 20-F contains words, such as “believe,” “expect,” “anticipate” and similar expressions that identify forward-looking statements, which reflect our views about future events and financial performance. We have made forward-looking statements that address, among other things, our:

- exploration and production activities, including drilling;
- activities relating to import, export, refining, petrochemicals and transportation, storage and distribution of petroleum, natural gas and oil products;
- activities relating to our lines of business, including the generation of electricity;
- projected and targeted capital expenditures and other costs, commitments and revenues;
- liquidity and sources of funding, including our ability to continue operating as a going concern;
- strategic alliances with other companies; and
- the monetization of certain of our assets.

Actual results could differ materially from those projected in such forward-looking statements as a result of various factors that may be beyond our control. These factors include, but are not limited to:

- changes in international crude oil and natural gas prices;

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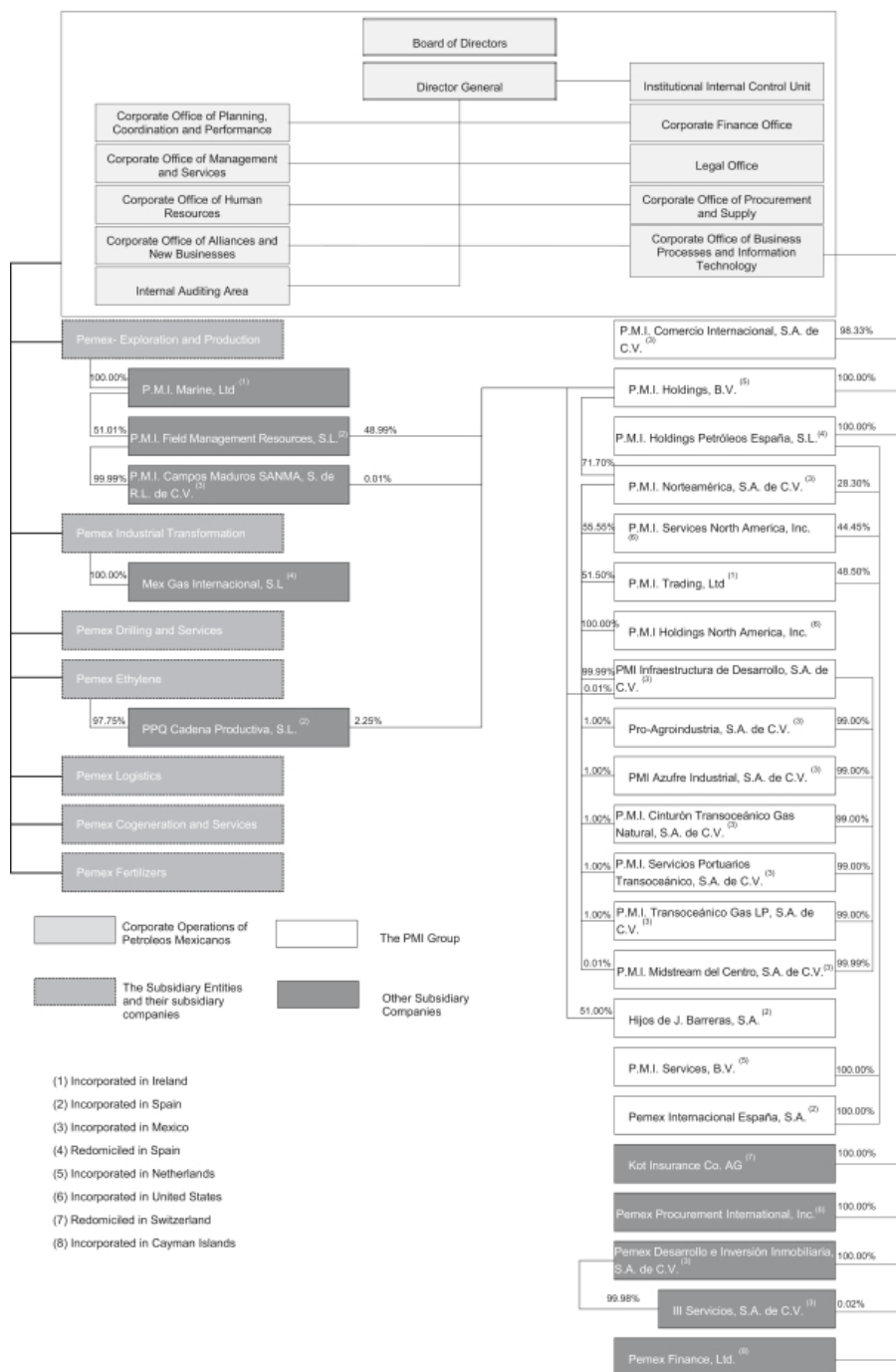
- effects on us from competition, including on our ability to hire and retain skilled personnel;
- limitations on our access to sources of financing on competitive terms;
- our ability to find, acquire or gain access to additional reserves and to develop the reserves that we obtain successfully;
- uncertainties inherent in making estimates of oil and gas reserves, including recently discovered oil and gas reserves;
- technical difficulties;
- significant developments in the global economy;
- significant economic or political developments in Mexico;
- developments affecting the energy sector; and
- changes in our legal regime or regulatory environment, including tax and environmental regulations.

Accordingly, you should not place undue reliance on these forward-looking statements. In any event, these statements speak only as of their dates, and we undertake no obligation to update or revise any of them, whether as a result of new information, future events or otherwise.

For a discussion of important factors that could cause actual results to differ materially from those contained in any forward-looking statement, see “Item 3—Key Information—Risk Factors.”

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### CONSOLIDATED STRUCTURE OF PEMEX



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[Table of Contents](#)**PART I****Item 1. Identity of Directors, Senior Management and Advisers**

Not applicable.

**Item 2. Offer Statistics and Expected Timetable**

Not applicable.

**Item 3. Key Information****SELECTED FINANCIAL DATA**

The selected statement of comprehensive income, statement of financial position and cash flows data set forth below as of and for the five years ended December 31, 2015 have been derived from, and should be read in conjunction with, our consolidated financial statements as of December 31, 2014 and 2015 and for the years ended December 31, 2013, 2014 and 2015, which are included in Item 18 of this report. Our consolidated financial statements for each of the fiscal years ended December 31, 2011 and 2012 were audited by KPMG Cárdenas Dosal, S.C., an independent registered public accounting firm. Our consolidated financial statements for each of the fiscal years ended December 31, 2013, 2014 and 2015 were audited by Castillo Miranda y Compañía, S.C. (which we refer to as BDO Mexico), an independent registered public accounting firm. Certain amounts in the consolidated financial statements for the years ended December 31, 2012, 2013 and 2014 have been reclassified to conform the presentation of the amounts in the consolidated financial statements for the year ended December 31, 2015. These reclassifications are not significant to the consolidated financial statements and had no impact on our consolidated net income.

As detailed below, for the years ended December 31, 2015 and 2014, we recognized net losses of Ps. 712.6 billion and Ps. 265.5 billion, respectively. In addition, we had negative equity as of December 31, 2015 and 2014 of Ps. 1,331.7 billion and Ps. 767.7 billion, respectively, which resulted in a negative working capital of Ps. 176.2 billion and Ps. 44.8 billion, respectively. This has led our independent auditors to state in their most recent audit report that there is substantial doubt about our ability to continue as a going concern. We have disclosed the circumstances that have caused these negative trends and the actions we are taking to face them and have concluded that we continue to operate as a going concern. Accordingly, we have prepared our consolidated financial statements on a going concern basis, which assumes that we can meet our payment obligations. For more information on the actions that we are taking to face these negative trends, see “Item 5—Operating and Financial Review and Prospects—Overview” and “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources.”



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## Selected Financial Data of PEMEX

	Year ended December 31, <sup>(1)</sup>					2015 <sup>(2)</sup> (in millions of U.S. dollars)
	2011	2012	2013	2014	2015	
	(in millions of pesos, except ratios)					
<b>Statement of Comprehensive Income Data</b>						
Net sales	Ps. 1,558,454	Ps. 1,646,912	Ps. 1,608,205	Ps. 1,586,728	Ps. 1,166,362	U.S. \$ 67,786
Operating income	861,311	905,339	727,622	615,480	(154,387)	(8,973)
Financing income	4,198	2,532	8,736	3,014	14,991	871
Financing cost	(35,154)	(46,011)	(39,586)	(51,559)	(67,774)	(3,939)
Derivative financial instruments (cost) income—Net	(1,697)	(6,258)	1,311	(9,439)	(21,450)	(1,247)
Exchange (loss) gain—Net	(60,143)	44,846	(3,951)	(76,999)	(154,766)	(8,995)
Net (loss) income for the period	(106,942)	2,600	(170,058)	(265,543)	(712,567)	(41,413)
<b>Statement of Financial Position Data (end of period)</b>						
Cash and cash equivalents	114,977	119,235	80,746	117,989	109,369	6,356
Total assets	1,981,374	2,024,183	2,047,390	2,128,368	1,775,654	103,197
Long-term debt	672,657	672,618	750,563	997,384	1,300,873	75,604
Total long-term liabilities	1,624,752	2,059,445	1,973,446	2,561,930	2,663,922	154,821
Total equity (deficit)	103,177	(271,066)	(185,247)	(767,721)	(1,331,676)	(77,394)
<b>Statement of Cash Flows</b>						
Depreciation and amortization	127,380	140,538	148,492	143,075	167,951	9,761
Acquisition of wells, pipelines, properties, plant and equipment <sup>(3)</sup>	167,014	197,509	245,628	230,679	253,514	14,734
<b>Other Financial Data</b>						
Ratio of earnings to fixed charges <sup>(4)(5)</sup>	—	1.01	—	—	—	—

(1) Includes Petróleos Mexicanos, the subsidiary entities and the subsidiary companies listed in Note 4 to our consolidated financial statements included herein.

(2) Translations into U.S. dollars of amounts in pesos have been made at the exchange rate established by the Ministry of Finance and Public Credit for accounting purposes of Ps. 17.2065 = U.S. \$1.00 at December 31, 2015. Such translations should not be construed as a representation that the peso amounts have been or could be converted into U.S. dollar amounts at the foregoing or any other rate.

(3) Includes capitalized financing cost. See Note 12 to our consolidated financial statements included herein and "Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources."

(4) Earnings, for this purpose, consist of pre-tax income (loss) from continuing operations before income from equity investees, plus fixed charges, minus interest capitalized during the period, plus the amortization of capitalized interest during the period and plus dividends received on equity investments. Pre-tax income (loss) is calculated after the deduction of hydrocarbon duties, but before the deduction of the hydrocarbon income tax and other income taxes. Fixed charges for this purpose consist of the sum of interest expense plus interest capitalized during the period, plus amortization premiums related to indebtedness and plus the estimated interest within rental expense. Fixed charges do not take into account exchange gain or loss attributable to our indebtedness.

(5) Earnings for the years ended December 31, 2011, 2013, 2014 and 2015 were insufficient to cover fixed charges. The amount by which fixed charges exceeded earnings was Ps. 106,476 million, Ps. 165,217 million, Ps. 283,640 and Ps. 765,161 million for the years ended December 31, 2011, 2013, 2014 and 2015 respectively.

Source: PEMEX's consolidated financial statements, prepared in accordance with IFRS, as it relates to the selected statements of comprehensive income, statement of financial position and statement of cash flows data; and Petróleos Mexicanos, as it relates to other financial data.

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**EXCHANGE RATES**

The following table sets forth, for the periods indicated, the high, low, average and period-end exchange rates for the purchase of U.S. dollars, expressed in pesos per U.S. dollar. These rates have not been restated in constant currency units.

<b>Period</b>	<b>Exchange Rate</b>			<b>Period End</b>
	<b>High</b>	<b>Low</b>	<b>Average<sup>(1)</sup></b>	
<b>Year Ended December 31,</b>				
2011	14.254	11.505	12.464	13.951
2012	14.365	12.625	13.140	12.964
2013	13.433	11.976	12.857	13.098
2014	14.794	12.846	13.370	14.750
2015	17.358	14.564	15.873	17.195
November 2015	16.854	16.373	16.631	16.601
December 2015	17.358	16.531	17.070	17.195
2016				
January 2016	18.595	17.360	18.065	18.211
February 2016	19.193	18.019	18.433	18.068
March 2016	17.941	17.214	17.630	17.214
April 2016	17.913	17.190	17.480	17.190

(1) Average of month-end rates, except for 2015 and 2016 monthly exchange rates.  
Source: Noon buying rate for cable transfers in New York reported by the Federal Reserve.

The noon buying rate for cable transfers in New York reported by the Federal Reserve on April 29, 2016 was Ps. 17.190 = U.S. \$1.00.

**RISK FACTORS****Risk Factors Related to Our Operations**

*Crude oil and natural gas prices are volatile and low crude oil and natural gas prices adversely affect our income and cash flows and the amount of hydrocarbon reserves that we have the right to extract and sell.*

International crude oil and natural gas prices are subject to global supply and demand and fluctuate due to many factors beyond our control. These factors include competition within the oil and natural gas industry, the prices and availability of alternative sources of energy, international economic trends, exchange rate fluctuations, expectations of inflation, domestic and foreign government regulations or international laws, political and other events in major oil and natural gas producing and consuming nations and actions taken by oil exporting countries, trading activity in oil and natural gas and transactions in derivative financial instruments (which we refer to as DFI) related to oil and gas.

When international crude oil, petroleum product and/or natural gas prices are low, we generally earn less revenue and, therefore, generate lower cash flows and earn less income before taxes and duties because our costs remain roughly constant. Conversely, when crude oil, petroleum product and natural gas prices are high, we earn more revenue and our income before taxes and duties increases. Crude oil export prices, which had generally traded above U.S. \$75.00 per barrel since October 2009 and traded above U.S. \$100.00 per barrel as recently as July 30, 2014, began to fall in August 2014. After a gradual decline that resulted in per barrel prices falling to U.S. \$91.16 at September 30, 2014, this decline sharply accelerated in October 2014 and prices fell to U.S. \$53.27 per barrel at the end of 2014, with a weighted average price for the year of U.S. \$86.00 per barrel. During 2015, the weighted average Mexican crude oil export price was approximately U.S. \$44.17 per barrel and fell to U.S. \$26.54 per barrel by the end of December 2015. This decline in crude oil prices had a direct effect on our results of operations and financial condition for the year ended December 31, 2015. So far in 2016, the weighted average Mexican crude oil export price has fallen to a low of U.S. \$20.70 per barrel, the lowest in twelve years, but has since rebounded to U.S. \$37.58 per barrel as of April 29, 2016. Future declines in international crude oil and natural gas prices will have a similar negative impact on our results of operations and financial condition. These fluctuations may also affect estimates of the amount of Mexico's hydrocarbon reserves that we have the right to extract and sell. See "—Risk Factors Related to our Relationship with the Mexican Government—Information on Mexico's hydrocarbon reserves is based on estimates, which are uncertain and subject to revisions" below and "Item 11—Quantitative and Qualitative Disclosures About Market Risk—Changes in Exposure to Main Risks—Market Risk—Hydrocarbon Price Risk."

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***We have a substantial amount of indebtedness and other liabilities and are exposed to liquidity constraints, which could make it difficult for us to obtain financing on favorable terms, could adversely affect our financial condition, results of operations and ability to repay our debt and, ultimately, our ability to operate as a going concern.***

We have a substantial amount of debt, which we have incurred primarily to finance the capital expenditures needed to carry out our capital investment projects. Due to our heavy tax burden, our cash flow from operations in recent years has not been sufficient to fund our capital expenditures and other expenses and, accordingly, our debt has significantly increased and our working capital has decreased. The sharp decline in oil prices that began in late 2014 has had a negative impact on our ability to generate positive cash flows, which, together with our continued heavy tax burden, has further exacerbated our ability to fund our capital expenditures and other expenses from cash flow from operations. Therefore, in order to develop our hydrocarbon reserves and amortize scheduled debt maturities, we will need to raise significant amounts of financing from a broad range of funding sources.

As of December 31, 2015, our total indebtedness, including accrued interest, was approximately U.S. \$86.8 billion (Ps. 1,493.4 billion), in nominal terms, which represents a 11.7% increase (a 30.6% increase in peso terms) compared to our total indebtedness, including accrued interest, of approximately U.S. \$77.7 billion (Ps. 1,143.3 billion) as of December 31, 2014. 26.7% of our existing debt as of December 31, 2015, or U.S. \$23.1 billion, is scheduled to mature in the next three years. As of December 31, 2015, we had negative working capital of U.S. \$10.2 billion. Our level of debt may increase further in the short or medium term and may have an adverse effect on our financial condition, results of operations and liquidity position. To service our debt and to raise funds for our capital expenditures, we have relied and may continue to rely on a combination of cash flows provided by operations, drawdowns under our available credit facilities and the incurrence of additional indebtedness. In addition, we have taken recent action to improve our financial condition, as described in more detail under “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Overview—Changes to Our Business Plan.”

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Certain rating agencies have expressed concerns regarding: (1) the total amount of our debt; (2) the significant increase in our indebtedness over the last several years; (3) our negative free cash flow during 2015, primarily resulting from our significant capital investment projects and the declining price of oil; (4) our substantial unfunded reserve for retirement pensions and seniority premiums, which was equal to U.S. \$74.4 billion as of December 31, 2015; and (5) the resilience of our operating expenses notwithstanding the sharp decline in oil prices that began in late 2014. On January 29, 2016, Standard & Poor's announced the downgrade of our stand-alone credit profile from BB+ to BB. On March 31, 2016, Moody's Investors Service announced the revision of our global foreign currency and local currency credit ratings from Baa1 to Baa3 and changed the outlook for its credit ratings to negative.

Any further lowering of our credit ratings may have adverse consequences on our ability to access the financial markets and/or our cost of financing. If we were unable to obtain financing on favorable terms, this could hamper our ability to (1) obtain further financing and (2) invest in projects financed through debt and impair our ability to meet our principal and interest payment obligations with our creditors. As a result, we may be exposed to liquidity constraints and may not be able to service our debt or make the capital expenditures required to maintain our current production levels and to maintain, and increase, the proved hydrocarbon reserves assigned to us by the Mexican Government, which may adversely affect our financial condition and results of operations. See "—Risk Factors Related to our Relationship with the Mexican Government—We must make significant capital expenditures to maintain our current production levels, and to maintain, as well as increase, the proved hydrocarbon reserves assigned to us by the Mexican Government. Reductions in our income, adjustments to our capital expenditures budget and our inability to obtain financing may limit our ability to make capital investments" below.

If such constraints occur at a time when our cash flow from operations is less than the resources necessary to fund our capital expenditures or to meet our debt service obligations, in order to provide additional liquidity to our operations, we could be forced to further reduce our planned capital expenditures, implement further austerity measures and/or sell additional non-strategic assets in order to raise funds. A reduction in our capital expenditure program could adversely affect our financial condition and results of operations. Additionally, such measures may not be sufficient to permit us to meet our obligations.

Our consolidated financial statements have been prepared under the assumption that we will continue as a going concern. However, our independent auditors have stated in their most recent report that there is substantial doubt about our ability to continue as a going concern as a result of our recurring losses from operations and our negative working capital and negative equity. Our consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty. If the actions we are taking to improve our financial condition, which are described in detail under "Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Overview—Changes to Our Business Plan," are not successful, we may not be able to continue operating as a going concern.

***We are an integrated oil and gas company and are exposed to production, equipment and transportation risks, criminal acts and deliberate acts of terror.***

We are subject to several risks that are common among oil and gas companies. These risks include production risks (fluctuations in production due to operational hazards, natural disasters or weather, accidents, etc.), equipment risks (relating to the adequacy and condition of our facilities and equipment) and transportation risks (relating to the condition and vulnerability of pipelines and other modes of transportation). More specifically, our business is subject to the risks of explosions in pipelines, refineries, plants, drilling wells and other facilities, oil spills, hurricanes in the Gulf of Mexico and other natural or geological disasters and accidents, fires and mechanical failures. Criminal attempts to divert our crude oil, natural gas or refined products from our pipeline network and facilities for illegal sale have resulted in explosions, property and environmental damage, injuries and loss of life.

Our facilities are also subject to the risk of sabotage, terrorism and cyber-attacks. In July 2007, two of our pipelines were attacked. In September 2007, six different sites were attacked and 12 of our pipelines were affected. The occurrence of these incidents related to the production, processing and transportation of oil and oil products could result in personal injuries, loss of life, environmental damage from the subsequent containment, clean-up and repair expenses, equipment damage and damage to our facilities. A shutdown of the affected facilities could disrupt our production and increase our production costs. As of the date of this annual report, there have been no similar occurrences since 2007. Although we have established an information security program, which includes cybersecurity systems and procedures to protect our information technology, and have not yet suffered a cyber-attack, if the integrity of our information technology were ever compromised due to a cyber-attack, our business operations could be disrupted and our proprietary information could be lost or stolen.

We purchase comprehensive insurance policies covering most of these risks; however, these policies may not cover all liabilities, and insurance may not be available for some of the consequential risks. There can be no assurance that accidents or acts of terror will not occur in the future, that insurance will adequately cover the entire scope or extent of our losses or that we may not be found directly liable in connection with claims arising from accidents or other similar events. See "Item 4—Information on the Company—Business Overview—PEMEX Corporate Matters—Insurance."

***Developments in the oil and gas industry and other factors may result in substantial write-downs of the carrying amount of certain of our assets, which could adversely affect our operating results and financial condition.***

We evaluate on an annual basis, or more frequently where the circumstances require, the carrying amount of our assets for possible impairment. Our impairment tests are performed by a comparison of the carrying amount of an individual asset or a cash-generating unit with its recoverable amount. Whenever the recoverable amount of an individual asset or cash-generating unit is less than its carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount.

Changes in the economic, regulatory, business or political environment in Mexico or other markets where we operate, such as the recent significant decline in international crude oil and gas prices and the devaluation of the peso against the U.S. dollar, among other factors, may result in the recognition of impairment charges in certain of our assets. Due to the continuing decline in oil prices, we have performed impairment tests of our non-financial assets (other than inventories and deferred taxes) at the end of each quarter. As of December 31, 2015, we recognized an impairment charge of Ps. 477,945 million. See Note 12(d) to our consolidated financial statements for further information about the impairment of certain of our assets. Future developments in the economic environment, in the oil and gas industry and other factors could result in further substantial impairment charges, adversely affecting our operating results and financial condition.

***Increased competition in the energy sector due to the new legal framework in Mexico could adversely affect our business and financial performance.***

The Mexican Constitution and the *Ley de Hidrocarburos* (Hydrocarbons Law) allows other oil and gas companies, in addition to us, to carry out certain activities related to the energy sector in Mexico, including exploration and extraction activities. As of the date of this annual report, the Mexican Government has entered into production sharing contracts with other oil and gas companies following the competitive bidding processes held in July and September 2015 for shallow water blocks and in December 2015 for exploratory blocks and discovered fields in onshore areas. Additional competitive bidding processes will take place in the future, including bids for deep water fields in December of this year.

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As a result, we face competition for the right to explore and develop new oil and gas reserves in Mexico. We will also likely face competition in connection with certain refining, transportation and processing activities. In addition, increased competition could make it difficult for us to hire and retain skilled personnel. For more information, see “Item 4—Information on the Company—History and Development—Recent Energy Reform.” If we are unable to compete successfully with other oil and gas companies in the energy sector in Mexico, our results of operations and financial condition may be adversely affected.

***We are subject to Mexican and international anti-corruption, anti-bribery and anti-money laundering laws. Our failure to comply with these laws could result in penalties, which could harm our reputation and have an adverse effect on our business, results of operations and financial condition.***

We are subject to Mexican and international anti-corruption, anti-bribery and anti-money laundering laws. See “Item 4—Information on the Company—General Regulatory Framework.” Although we maintain policies and processes intended to comply with these laws, including the review of our internal control over financial reporting, we cannot ensure that these compliance policies and processes will prevent intentional, reckless or negligent acts committed by our officers or employees.

If we fail to comply with any applicable anti-corruption, anti-bribery or anti-money laundering laws, we and our officers and employees may be subject to criminal, administrative or civil penalties and other remedial measures, which could have material adverse effects on our business, financial condition and results of operations. Any investigation of potential violations of anti-corruption, anti-bribery or anti-money laundering laws by governmental authorities in Mexico or other jurisdictions could result in an inability to prepare our consolidated financial statements in a timely manner. This could adversely impact our reputation, ability to access the financial markets and ability to obtain contracts, assignments, permits and other government authorizations necessary to participate in our industry, which, in turn, could have adverse effects on our business, results of operations and financial condition.

***Our compliance with environmental regulations in Mexico could result in material adverse effects on our results of operations.***

A wide range of general and industry-specific Mexican federal and state environmental laws and regulations apply to our operations; these laws and regulations are often difficult and costly to comply with and carry substantial penalties for non-compliance. This regulatory burden increases our costs because it requires us to make significant capital expenditures and limits our ability to extract hydrocarbons, resulting in lower revenues. For an estimate of our accrued environmental liabilities, see “Item 4—Information on the Company—Environmental Regulation—Environmental Liabilities.” However, growing international concern over greenhouse gas emissions and climate change could result in new laws and regulations that could adversely affect our results of operations and financial condition. International agreements, including the recent Paris Agreement approved by the Mexican Government, contemplate coordinated efforts to combat climate change. While it is still too early to know how these new agreements will be implemented, we may become subject to market changes, including carbon taxes, efficiency standards, cap-and-trade and emission allowances and credits. These measures could increase our operating and maintenance costs, increase the price of our hydrocarbon products and possibly shift consumer demand to lower-carbon sources. See “Item 4—Environmental Regulation—Global Climate Change and Carbon Dioxide Emissions Reduction” for more information on the Mexican Government’s current legal and regulatory framework for combatting climate change.

## **Risk Factors Related to Mexico**

***Economic conditions and government policies in Mexico and elsewhere may have a material impact on our operations.***

A deterioration in Mexico’s economic condition, social instability, political unrest or other adverse social developments in Mexico could adversely affect our business and financial condition. Those events could also lead to increased volatility in the foreign exchange and financial markets, thereby affecting our ability to obtain new financing and service our debt. Additionally, the Mexican Government announced budget cuts in November 2015 and February 2016 in response to the recent decline in international crude oil prices, and it may cut spending in the future.

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See “—Risk Factors Related to our Relationship with the Mexican Government—The Mexican Government controls us and it could limit our ability to satisfy our external debt obligations or could reorganize or transfer us or our assets” below. These cuts could adversely affect the Mexican economy and, consequently, our business, financial condition, operating results and prospects.

In the past, Mexico has experienced several periods of slow or negative economic growth, high inflation, high interest rates, currency devaluation and other economic problems. These problems may worsen or reemerge, as applicable, in the future and could adversely affect our business and ability to service our debt. A worsening of international financial or economic conditions, such as a slowdown in growth or recessionary conditions in Mexico’s trading partners, including the United States, or the emergence of a new financial crisis, could have adverse effects on the Mexican economy, our financial condition and our ability to service our debt.

***Changes in Mexico’s exchange control laws may hamper our ability to service our foreign currency debt.***

The Mexican Government does not currently restrict the ability of Mexican companies or individuals to convert pesos into other currencies. However, we cannot provide assurances that the Mexican Government will maintain its current policies with regard to the peso. In the future, the Mexican Government could impose a restrictive exchange control policy, as it has done in the past. Mexican Government policies preventing us from exchanging pesos into U.S. dollars could hamper our ability to service our foreign currency obligations, including our debt, the majority of which is denominated in currencies other than pesos.

***Political conditions in Mexico could materially and adversely affect Mexican economic policy and, in turn, our operations.***

Political events in Mexico may significantly affect Mexican economic policy and, consequently, our operations. On December 1, 2012, Mr. Enrique Peña Nieto, a member of the *Partido Revolucionario Institucional* (Institutional Revolutionary Party, or PRI), formally assumed office for a six-year term as the President of Mexico. As of the date of this annual report, no political party holds a simple majority in either house of the Mexican Congress.

***Mexico has experienced a period of increasing criminal activity, which could affect our operations.***

In recent years, Mexico has experienced a period of increasing criminal activity, primarily due to the activities of drug cartels and related criminal organizations. In addition, the development of the illicit market in fuels in Mexico has led to increases in theft and illegal trade in the fuels that we produce. In response, the Mexican Government has implemented various security measures and has strengthened its military and police forces, and we have also established various strategic measures aimed at decreasing incidents of theft and other criminal activity directed at our facilities and products. See “Item 8—Financial Information—Legal Proceedings—Actions Against the Illicit Market in Fuels.” Despite these efforts, criminal activity continues to exist in Mexico, some of which may target our facilities and products. These activities, their possible escalation and the violence associated with them, in an extreme case, may have a negative impact on our financial condition and results of operations.

## **Risk Factors Related to our Relationship with the Mexican Government**

***The Mexican Government controls us and it could limit our ability to satisfy our external debt obligations or could reorganize or transfer us or our assets.***

We are controlled by the Mexican Government and our annual budget may be adjusted by the Mexican Government in certain respects. Pursuant to the *Petróleos Mexicanos Law*, *Petróleos Mexicanos* was transformed from a decentralized public entity to a productive state-owned company on October 7, 2014. The *Petróleos Mexicanos Law* establishes a special regime governing, among other things, our budget, debt levels, administrative liabilities, acquisitions, leases, services and public works. This special regime provides *Petróleos Mexicanos* with additional technical and managerial autonomy and, subject to certain restrictions, with additional autonomy with respect to our budget. Notwithstanding this increased autonomy, the Mexican Government still controls us and has the power to adjust our financial balance goal, which represents our targeted net cash flow for the fiscal year based on our projected revenues and expenses, and our annual wage and salary expenditures, subject to the approval of the *Cámara de Diputados* (Chamber of Deputies).

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The adjustments to our annual budget mentioned above may compromise our ability to develop the reserves assigned to us by the Mexican Government and to successfully compete with other oil and gas companies that enter the Mexican energy sector. See “Item 4—Information on the Company—History and Development—Capital Expenditures and Investments—Capital Expenditures Budget” for more information about our February 2015 and February 2016 budget adjustments and “—General Regulatory Framework” for more information about the Mexican Government’s authority with respect to our budget. In addition, the Mexican Government’s control over us could adversely affect our ability to make payments under any securities issued by Petróleos Mexicanos. Although Petróleos Mexicanos is wholly owned by the Mexican Government, our financing obligations do not constitute obligations of and are not guaranteed by the Mexican Government.

The Mexican Government’s agreements with international creditors may affect our external debt obligations. In certain past debt restructurings of the Mexican Government, Petróleos Mexicanos’ external indebtedness was treated on the same terms as the debt of the Mexican Government and other public sector entities, and it may be treated on similar terms in any future debt restructuring. In addition, Mexico has entered into agreements with official bilateral creditors to reschedule public sector external debt. Mexico has not requested restructuring of bonds or debt owed to multilateral agencies.

The Mexican Government has the power, if the Mexican Constitution and federal law were further amended, to further reorganize our corporate structure, including a transfer of all or a portion of our assets to an entity not controlled, directly or indirectly, by the Mexican Government. See “—Risk Factors Related to Mexico” above.

***We pay significant special taxes and duties to the Mexican Government, which may limit our capacity to expand our investment program or negatively impact our financial condition generally.***

We are required to make significant payments to the Mexican Government, including in the form of taxes and duties, which may limit our ability to make capital investments. In 2015, approximately 37.5% of our sales revenues was used for payments to the Mexican Government in the form of taxes and duties, which constituted a substantial portion of the Mexican Government’s revenues.

The Secondary Legislation includes changes to the fiscal regime applicable to us, particularly with respect to the exploration and extraction activities that we carry out in Mexico. Beginning in 2016, we have the obligation, subject to the conditions set forth in the Petróleos Mexicanos Law, to pay a state dividend in lieu of certain payments that we paid at the discretion of the Mexican Government. This state dividend will be calculated by the Ministry of Finance and Public Credit as a percentage of the net income that we generate through activities subject to the *Ley de Ingresos sobre Hidrocarburos* (Hydrocarbons Revenue Law) on an annual basis and approved by the Mexican Congress in accordance with the terms of the Petróleos Mexicanos Law. The amount we pay each year under this state dividend will decrease in subsequent years, reaching 0% by 2026. The Mexican Government has announced that we will not be required to pay a state dividend in 2016. See “Item 8—Financial Information—Dividends” for more information. Although the changes to the fiscal regime applicable to us are designed in part to reduce the Mexican Government’s reliance on payments made by us, we cannot provide assurances that we will not be required to continue to pay a large proportion of our sales revenue to the Mexican Government. See “Item 4—Information on the Company—Taxes, Duties and Other Payments to the Mexican Government—Fiscal Regime.” As of the date of this annual report, we are assessing the impact that these changes may have on us. In addition, the Mexican Government may change the applicable rules in the future.

***The Mexican Government has imposed price controls in the domestic market on our products.***

The Mexican Government has from time to time imposed price controls on the sales of natural gas, liquefied petroleum gas, gasoline, diesel, gas oil intended for domestic use, fuel oil and other products. As a result of these price controls, we have not been able to pass on all of the increases in the prices of our product purchases to our customers in the domestic market when the peso depreciates in relation to the U.S. dollar. A depreciation of the peso increases our cost of imported oil and oil products, without a corresponding increase in our revenues unless we are able to increase the price at which we sell products in Mexico. We do not control the Mexican Government’s domestic policies and the Mexican Government could impose additional price controls on the domestic market in the future. The imposition of such price controls would adversely affect our results of operations. For more information, see “Item 4—Information on the Company—Business Overview—Refining—Pricing Decrees” and “Item 4—Information on the Company—Business Overview—Gas and Basic Petrochemicals—Pricing Decrees.”

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***The Mexican nation, not us, owns the hydrocarbon reserves located in Mexico and our right to continue to extract these reserves is subject to the approval of the Ministry of Energy.***

The Mexican Constitution provides that the Mexican nation, not us, owns all petroleum and other hydrocarbon reserves located in Mexico.

Article 27 of the Mexican Constitution provides that the Mexican Government will carry out exploration and production activities through agreements with third parties and through assignments to and agreements with us. The Secondary Legislation allows us and other oil and gas companies to explore and extract the petroleum and other hydrocarbon reserves located in Mexico, subject to assignment of rights by the Ministry of Energy and entry into agreements pursuant to a competitive bidding process.

Access to crude oil and natural gas reserves is essential to an oil and gas company's sustained production and generation of income, and our ability to generate income would be materially and adversely affected if the Mexican Government were to restrict or prevent us from exploring or extracting any of the crude oil and natural gas reserves that it has assigned to us or if we are unable to compete effectively with other oil and gas companies in future bidding rounds for additional exploration and production rights in Mexico. For more information, see "—We must make significant capital expenditures to maintain our current production levels, and to maintain, as well as increase, the proved hydrocarbon reserves assigned to us by the Mexican Government. Reductions in our income, adjustments to our capital expenditures budget and our inability to obtain financing may limit our ability to make capital investments" below.

***Information on Mexico's hydrocarbon reserves is based on estimates, which are uncertain and subject to revisions.***

The information on oil, gas and other reserves set forth in this annual report is based on estimates. Reserves valuation is a subjective process of estimating underground accumulations of crude oil and natural gas that cannot be measured in an exact manner; the accuracy of any reserves estimate depends on the quality and reliability of available data, engineering and geological interpretation and subjective judgment. Additionally, estimates may be revised based on subsequent results of drilling, testing and production. These estimates are also subject to certain adjustments based on changes in variables, including crude oil prices. Therefore, proved reserves estimates may differ materially from the ultimately recoverable quantities of crude oil and natural gas. Downward revisions in our reserve estimates could lead to lower future production, which could have an adverse effect on our results of operations and financial condition. See "—Risk Factors Related to Our Operations—Crude oil and natural gas prices are volatile and low crude oil and natural gas prices adversely affect our income and cash flows and the amount of hydrocarbon reserves that we have the right to extract and sell" above. We revise annually our estimates of hydrocarbon reserves that we are entitled to extract and sell, which may result in material revisions to these estimates. Our ability to maintain our long-term growth objectives for oil production depends on our ability to successfully develop our reserves, and failure to do so could prevent us from achieving our long-term goals for growth in production.

***We must make significant capital expenditures to maintain our current production levels, and to maintain, as well as increase, the proved hydrocarbon reserves assigned to us by the Mexican Government. Reductions in our income, adjustments to our capital expenditures budget and our inability to obtain financing may limit our ability to make capital investments.***

Because our ability to maintain, as well as increase, our oil production levels is highly dependent upon our ability to successfully develop existing hydrocarbon reserves and, in the long term, upon our ability to obtain the right to develop additional reserves, we continually invest capital to enhance our hydrocarbon recovery ratio and improve the reliability and productivity of our infrastructure. During 2015, our exploratory activity led to the incorporation to proved reserves of approximately 120 million barrels of oil equivalent. This amount, however, was less than the reductions made due to revisions, delimitations and decreased development and production in 2015. Accordingly, our total proved reserves decreased by 22.1%, from 12,380 million barrels of crude oil equivalent as of December 31, 2014 to 9,632 million barrels of crude oil as of December 31, 2015.



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See “Item 4—Information on the Company—Business Overview—Exploration and Production—Reserves” for more information about the factors leading to this decline, including the results of Round Zero. Our crude oil production decreased by 1.0% from 2012 to 2013, by 3.7% from 2013 to 2014 and by 6.7% from 2014 to 2015, primarily as a result of the decline of production in the Cantarell, Aceite Terciario del Golfo (which we refer to as ATG), Delta del Grijalva, Crudo Ligerio Marino and Ixtal-Manik projects.

The recent energy reform in Mexico outlined a process, commonly referred to as Round Zero, for the determination of our initial allocation of rights to continue to carry out exploration and production activities in Mexico. On August 13, 2014, the Ministry of Energy granted us the right to continue to explore and develop areas that together contain 95.9% of Mexico’s estimated proved reserves of crude oil and natural gas. The development of the reserves that were assigned to us pursuant to Round Zero, particularly the reserves in the deep waters of the Gulf of Mexico and in shale oil and gas fields in the Burgos basin, will demand significant capital investments and will pose significant operational challenges. Our right to develop the reserves assigned to us through Round Zero is conditioned on our ability to develop such reserves in accordance with our development plans, which were based on our technical, financial and operational capabilities at the time. See “Item 4—History and Development—Recent Energy Reform—Assignment of Exploration and Production Rights.” We cannot provide assurances that we will have or will be able to obtain, in the time frame that we expect, sufficient resources or the technical capacity necessary to explore and extract the reserves that the Mexican Government assigned to us as part of Round Zero, or that it may grant to us in the future. The decline in oil prices has forced us to make adjustments to our budget, including a significant reduction of our capital expenditures. Unless we are able to increase our capital expenditures, we may not be able to develop the reserves assigned to us in accordance with our development plans. We would lose the right to continue to extract these reserves if we fail to develop them in accordance with our development plans, which could adversely affect our operating results and financial condition. In addition, increased competition in the oil and gas sector in Mexico may increase the costs of obtaining additional acreage in bidding rounds for the rights to new reserves.

Our ability to make capital expenditures is limited by the substantial taxes and duties that we pay to the Mexican Government, the ability of the Mexican Government to adjust certain aspects of our annual budget, cyclical decreases in our revenues primarily related to lower oil prices and any constraints on our liquidity. The availability of financing may limit our ability to make capital investments that are necessary to maintain current production levels and increase the proved hydrocarbon reserves that we are entitled to extract. Nevertheless, the recent energy reform has provided us with opportunities to enter into strategic alliances and partnerships, which may reduce our capital commitments and allow us to participate in projects for which we are more competitive. For more information, see “Item 4—Information on the Company—History and Development—Capital Expenditures and Investments” and “—Recent Energy Reform.” For more information on the liquidity constraints we are exposed to, see “—We have a substantial amount of indebtedness and other liabilities and are exposed to liquidity constraints, which could make it difficult for us to obtain financing on favorable terms and adversely affect our financial condition, results of operations and ability to repay our debt” above.

*We may claim some immunities under the Foreign Sovereign Immunities Act and Mexican law, and your ability to sue or recover may be limited.*

We are public-sector entities of the Mexican Government. Accordingly, you may not be able to obtain a judgment in a U.S. court against us unless the U.S. court determines that we are not entitled to sovereign immunity with respect to that action. Under certain circumstances, Mexican law may limit your ability to enforce judgments against us in the courts of Mexico. We also do not know whether Mexican courts would enforce judgments of U.S. courts based on the civil liability provisions of the U.S. federal securities laws. Therefore, even if you were able to obtain a U.S. judgment against us, you might not be able to obtain a judgment in Mexico that is based on that U.S. judgment. Moreover, you may not be able to enforce a judgment against our property in the United States except under the limited circumstances specified in the Foreign Sovereign Immunities Act of 1976, as amended. Finally, if you were to bring an action in Mexico seeking to enforce our obligations under any securities issued by Petróleos Mexicanos, satisfaction of those obligations may be made in pesos, pursuant to the laws of Mexico.

Our directors and officers, as well as some of the experts named in this annual report, reside outside the United States. Substantially all of our assets and those of most of our directors, officers and experts are located outside the United States. As a result, investors may not be able to effect service of process on our directors or officers or those experts within the United States.

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**Item 4. Information on the Company****HISTORY AND DEVELOPMENT**

We are the largest company in Mexico according to the June 2015 special edition of *Expansión* magazine, and according to the November 17, 2015 issue of *Petroleum Intelligence Weekly*, we were the eighth largest crude oil producer and the fifteenth largest oil and gas company in the world based on data from the year 2014.

Our executive offices are located at Avenida Marina Nacional No. 329, Colonia Verónica Anzures, Ciudad de México 11300, México. Our telephone number is (52-55) 1944-2500.

In March 1938, President Lázaro Cárdenas del Río nationalized the foreign-owned oil companies that were then operating in Mexico, and the Mexican Congress established *Petróleos Mexicanos* through the *Decreto que crea la Institución Petróleos Mexicanos* (Decree that creates the entity *Petróleos Mexicanos*), which was published in the Official Gazette of the Federation and took effect on July 20, 1938.

In July 1992, the *Ley Orgánica de Petróleos Mexicanos y Organismos Subsidiarios* (Organic Law of *Petróleos Mexicanos* and Subsidiary Entities) took effect and, among other things, created Pemex-Exploration and Production, Pemex-Refining, Pemex-Gas and Basic Petrochemicals and Pemex-Petrochemicals as decentralized public entities of the Mexican Government with the legal authority to own property and conduct business in their own names. Each of the subsidiary entities had the characteristics of a subsidiary of *Petróleos Mexicanos*. The principal lines of business of those subsidiary entities were as follows:

- Pemex-Exploration and Production explored for, exploited, transported, stored and marketed crude oil and natural gas;
- Pemex-Refining refined petroleum products and derivatives that may be used as basic industrial raw materials and stored, transported, distributed and marketed these products and derivatives;
- Pemex-Gas and Basic Petrochemicals processed, produced, stored, transported, distributed and marketed natural gas, natural gas liquids, artificial gas and derivatives that may be used as basic industrial raw materials and produced, stored, transported, distributed and marketed petrochemicals that were classified as “basic” (ethane, propane, butane, pentanes, hexane, heptane, carbon black feedstocks, natural gasoline and methane, when used as raw materials and intended for use in petrochemical industrial processes) prior to the enactment of the Hydrocarbons Law in August 2014; and
- Pemex-Petrochemicals engaged in industrial petrochemical processes and stored, distributed and marketed other petrochemicals.

**Recent Energy Reform***Energy Reform Decree*

On December 20, 2013, amendments to Articles 25, 27 and 28 of the Mexican Constitution were signed into law by President Enrique Peña Nieto and published in the Official Gazette of the Federation. We refer to this as the Energy Reform Decree. The Energy Reform Decree, which includes transitional articles setting forth the general framework and timeline for the related secondary legislation, took effect on December 21, 2013.

The key features of the Energy Reform Decree are:

- *Ownership by Mexican Nation:* Solid, liquid and gaseous hydrocarbons located in the subsoil of Mexico remain the property of the Mexican nation.
- *Initial Assignments through Round Zero:* The Ministry of Energy, with technical assistance from the *Comisión Nacional de Hidrocarburos* (National Hydrocarbons Commission, or NHC) determined our initial allocation of rights to continue to carry out exploration and extraction activities in Mexico based on our technical, financial and operational capabilities to explore for and extract hydrocarbons in an efficient and competitive manner.

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On March 21, 2014, we submitted to the Ministry of Energy a request that we retain rights that we believed would allow us to maintain our production and provide sufficient exploration opportunities to increase our production in the future. On August 13, 2014, the Ministry of Energy published the results of Round Zero, through which we were assigned rights to 95.9% of the proved reserves that we requested. The Ministry of Energy may assign, on an exceptional basis, additional exploration and extraction areas to Petróleos Mexicanos or other productive state-owned companies in accordance with the terms set forth in the Hydrocarbons Law. See “—Assignment of Exploration and Production Rights” below in this Item 4.

- *Booking of Reserves:* Productive state-owned companies and other companies participating in the Mexican hydrocarbons industry will be allowed to report assignments or contracts and the corresponding expected benefits for accounting and financial purposes, with the understanding that any solid, liquid or gaseous hydrocarbons that are in the subsoil will remain the property of the Mexican nation.

### *Secondary Legislation*

On August 6, 2014, the Mexican Congress completed the process of approving the related secondary legislation, which was signed into law by President Enrique Peña Nieto and published in the Official Gazette of the Federation on August 11, 2014. We refer in this annual report to this legislation as the Secondary Legislation. The Secondary Legislation includes nine new laws, of which the following are most relevant to our operations:

- The new Petróleos Mexicanos Law, which took effect, with the exception of certain provisions, on October 7, 2014 and repealed the previous Petróleos Mexicanos Law, which had been effective as of November 29, 2008;
- Hydrocarbons Law, which took effect on August 12, 2014 and repealed the *Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo* (Regulatory Law to Article 27 of the Mexican Constitution Concerning Petroleum Affairs, which we refer to as the Regulatory Law);
- *Ley de Ingresos sobre Hidrocarburos* (Hydrocarbons Revenue Law);
- *Ley de los Órganos Reguladores Coordinados en Materia Energética* (Coordinated Energy Regulatory Bodies Law);
- *Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos* (National Agency of Industrial Safety and Environmental Protection for the Hydrocarbons Sector Law); and
- *Ley del Fondo Mexicano del Petróleo para la Estabilización y el Desarrollo* (Mexican Petroleum Fund for Stabilization and Development Law).

The Secondary Legislation also includes amendments to several laws, including the following:

- *Ley Federal de las Entidades Paraestatales* (Federal Law of Public Sector Entities);
- *Ley Federal de Presupuesto y Responsabilidad Hacendaria* (Federal Law of Budget and Fiscal Accountability);
- *Ley General de Deuda Pública* (General Law of Public Debt);
- *Ley Federal de Derechos* (Federal Duties Law);
- *Ley Orgánica de la Administración Pública Federal* (Federal Public Administration Organic Law);

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- *Ley de Obras Públicas y Servicios Relacionados con las Mismas* (Law of Public Works and Related Services); and
- *Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público* (Law of Acquisitions, Leases and Services of the Public Sector).

On October 31, 2014, the regulations relating to the Secondary Legislation, including the *Reglamento de la Ley de Petróleos Mexicanos* (Regulations to the Petróleos Mexicanos Law), were published in the Official Gazette of the Federation. Subsequent modifications to the Regulations to the Petróleos Mexicanos Law took effect on February 9, 2015.

### *Legal Regime for Petróleos Mexicanos*

As part of this recent energy reform, Petróleos Mexicanos was transformed from a decentralized public entity into a productive state-owned company on October 7, 2014—the day on which the new Petróleos Mexicanos Law took effect, with the exception of certain provisions. As a productive state-owned company, Petróleos Mexicanos remains wholly owned by the Mexican Government and has the corporate purpose of generating economic value and increasing the income of the Mexican nation while adhering to principles of equity, as well as a social and environmental responsibility.

On December 2, 2014, upon its determination that the new Board of Directors of Petróleos Mexicanos was performing its duties and the mechanisms for our oversight, transparency and accountability had been implemented, the Ministry of Energy formally announced in the Official Gazette of the Federation that the special regime provided for in the Petróleos Mexicanos Law, which governs Petróleos Mexicanos' activities relating to productive state-owned subsidiaries, affiliates, compensation, assets, administrative liabilities, budget, debt levels and the state dividend, had taken effect. On June 10, 2015, the *Disposiciones Generales de Contratación para Petróleos Mexicanos y Sus Empresas Productivas Subsidiarias* (General Provisions for Contracting for Petróleos Mexicanos and its Productive State-Owned Subsidiaries) were published in the Official Gazette of the Federation, and on June 11, 2015, the special regime for acquisitions, leases, services and public works became effective.

### *Corporate Reorganization*

In accordance with the transitional articles of the Petróleos Mexicanos Law, on November 18, 2014, the Board of Directors of Petróleos Mexicanos approved the Director General's proposal for our corporate reorganization. In our corporate reorganization, the four existing subsidiary entities of Petróleos Mexicanos were transformed into two new productive state-owned subsidiaries—Pemex Exploration and Production and Pemex Industrial Transformation—and five new productive state-owned subsidiaries—Pemex Drilling and Services, Pemex Logistics, Pemex Cogeneration and Services, Pemex Fertilizers and Pemex Ethylene—were created. Each of these productive state-owned subsidiaries is a legal entity empowered to own property and carry on business in its own name and has technical and operational autonomy, subject to the central coordination and strategic direction of Petróleos Mexicanos.

On March 27, 2015, the Board of Directors of Petróleos Mexicanos adopted *acuerdos de creación* (creation resolutions) for each of the new productive state-owned subsidiaries, all of which were subsequently published in the Official Gazette of the Federation on April 28, 2015.

On June 1, 2015, Pemex Exploration and Production and Pemex Cogeneration and Services were formed in accordance with the May 22, 2015 resolution of the Board of Directors of Petróleos Mexicanos that was published in the Official Gazette of the Federation on May 29, 2015. Effective as of June 1, 2015, Pemex Exploration and Production became, as a matter of Mexican law, the successor to Pemex-Exploration and Production, the decentralized public entity and former subsidiary of Petróleos Mexicanos that was dissolved as of that date. On August 1, 2015, Pemex Drilling and Services, Pemex Fertilizers and Pemex Ethylene were formed in accordance with the July 29, 2015 resolution of the Board of Directors of Petróleos Mexicanos that was published in the Official Gazette of the Federation on July 31, 2015. On October 1, 2015, Pemex Logistics was formed in accordance with the September 24, 2015 resolution of the Board of Directors of Petróleos Mexicanos that was published in the Official Gazette of the Federation on October 1, 2015. On November 1, 2015, Pemex Industrial Transformation was formed in accordance with the September 24, 2015 resolution of the Board of Directors of Petróleos Mexicanos that was published in the Official Gazette of the Federation on October 6, 2015. Each of Pemex-Refining, Pemex-Gas and Basic Petrochemicals and Pemex-Petrochemicals were dissolved effective as of November 1, 2015.

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The principal lines of business of the new productive state-owned subsidiaries are as follows:

- Pemex Exploration and Production explores for, exploits, transports, stores and markets crude oil and natural gas;
- Pemex Cogeneration and Services generates, supplies and trades electric and thermal energy;
- Pemex Drilling and Services performs drilling and well repair services;
- Pemex Fertilizers integrates the ammonia production chain up to the point of sale of fertilizers;
- Pemex Ethylene separates the ethylene business from our petrochemicals segment in order to take advantage of the integration of the ethylene production chain, and it distributes and trades other gases, including methane and propylene;
- Pemex Logistics provides land, maritime and pipeline transportation, storage and distribution to us and third parties; and
- Pemex Industrial Transformation refines petroleum products and derivatives, processes natural gas, natural gas liquids, artificial gas and derivatives and engages in industrial petrochemical processes.

***Key New Features of the Secondary Legislation that Relates to the Hydrocarbons Sector***

We describe below the key features of the Secondary Legislation that relate to the hydrocarbons sector in Mexico:

- *Third-Party Participation and Contractual Regime:* Together, the Hydrocarbons Law and the Hydrocarbons Revenue Law establish a new legal framework for the exploration and production of hydrocarbons through assignments and contracts, as well as the new fiscal regime through which the Mexican Government will collect revenues from participants in the Mexican hydrocarbons industry. The Hydrocarbons Law empowers the Ministry of Energy to determine the appropriate contract model for each area that is subject to a competitive bidding process, while the Ministry of Finance and Public Credit is responsible for determining the economic and fiscal terms of each contract. The following arrangements comprise the new contractual regime established by the Secondary Legislation for upstream activities:
  - licenses, pursuant to which a license holder is entitled to the hydrocarbons that are extracted from the subsoil;
  - production-sharing contracts, pursuant to which a contractor is entitled to receive a percentage of production;
  - profit-sharing contracts, pursuant to which a contractor is entitled to receive a percentage of the profit from the sale of the extracted hydrocarbons; and
  - service contracts, pursuant to which a contractor would receive cash payments for services performed (service contracts, together with licenses, production-sharing contracts and profit-sharing contracts are known as the contracts for the exploration and extraction of hydrocarbons, collectively referred to as contracts for exploration and production).

The fiscal terms of each contract for exploration and production are to be established in accordance with the Hydrocarbons Revenue Law. See “—Taxes, Duties and Other Payments to the Mexican Government—Fiscal Regime” below in this Item 4.

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For midstream and downstream activities, including oil refining and natural gas processing, the Hydrocarbons Law establishes a permit regime that is regulated by the Ministry of Energy and the *Comisión Reguladora de Energía* (Energy Regulatory Commission). The Hydrocarbons Law also sets forth the process by which entities may apply for these permits. In accordance with the transitional articles of the Hydrocarbons Law, the Energy Regulatory Commission will begin issuing permits for the retail sale of gasoline and diesel fuel in 2016. Until December 31, 2017, the Mexican Government may continue issuing pricing decrees to regulate the maximum prices for the retail sale of gasoline and diesel fuel, taking into account transportation costs between regions, inflation and the volatility of international fuel prices, among other factors. See “—Business Overview—Refining—Pricing Decrees” below in this Item 4. Beginning in 2018, the prices of gasoline and diesel fuel will be freely determined by market conditions.

- *Pipeline System:* Effective August 29, 2014, the *Centro Nacional de Control de Gas Natural* (National Natural Gas Control Center, or CENAGAS), a decentralized public entity of the Mexican Government, was created to act as the independent administrator of the *Sistema de Transporte y Almacenamiento Nacional Integrado de Gas Natural* (National System for the Integrated Transportation and Storage of Natural Gas, which we refer to as the Integrated Natural Gas System), an interconnected system comprising the national gas pipeline system and storage facilities, as well as the compression, liquefaction, decompression, regasification and other related infrastructure owned by CENAGAS or other companies participating in the system. Pursuant to the Hydrocarbons Law, Pemex-Gas and Basic Petrochemicals was required to transfer to CENAGAS the assets and contracts necessary for CENAGAS to manage the Integrated Natural Gas System. For more information on this transfer of assets, see “Item 4—Information on the Company—Gas and Basic Petrochemicals—Pipelines—Private Sector Participation in Natural Gas Distribution.”
- *Regulatory Oversight and Authority:* The Federal Public Administration Organic Law, which was amended in connection with the Secondary Legislation, now grants the Ministry of Energy additional authority in connection with oil and gas activities conducted in Mexico. In addition, the Coordinated Energy Regulatory Bodies Law, which was enacted as part of the Secondary Legislation, establishes the technical and administrative authority of the NHC and the Energy Regulatory Commission over certain of our operations and the energy sector generally. The authority of these bodies is described further below.
  - The Ministry of Energy, with the technical assistance of the NHC, has the authority to grant assignments to us or other productive state-owned companies, select the oil and gas areas that will be subject to public bidding, establish the technical guidelines for bidding processes, as well as for the contracts themselves and issue permits for oil refining, natural gas processing and the import and export of crude oil, natural gas and petroleum products.
  - The NHC is responsible for conducting the public bidding process and executing the corresponding contracts, as well as supervising oil and gas production activities. In addition, the Ministry of Finance and Public Credit is entrusted with establishing the economic terms for contracts assigned pursuant to the public bidding process.
  - The Energy Regulatory Commission may grant and regulate permits for the storage, transportation and distribution through pipelines of oil, gas, petroleum products and petrochemicals, regulate third-party access to transportation pipelines, as well as to the storage of hydrocarbons and their derivatives; and regulate the first-hand sale of the aforementioned products.
  - The NHC and the Energy Regulatory Commission have been vested with their own legal status and technical and administrative autonomy.
- *Safety and the Environment:* The *Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos* (National Agency of Industrial Safety and Environmental Protection for the Hydrocarbons Sector, which we refer to as the Hydrocarbons Industrial Safety and Environmental Protection Agency) was created to regulate and supervise activities and facilities in the hydrocarbons industry related to industrial safety and environmental protection. This agency operates as an administrative body of the *Secretaría de Medio Ambiente y Recursos Naturales* (Ministry of the Environment and Natural Resources or SEMARNAT), with technical and administrative autonomy, and, among other things, supervises the decommissioning and abandonment of facilities.

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Relatedly, all companies participating in the hydrocarbons sector will be subject to regulations issued by this agency, including safety standards and limits on greenhouse gas emissions. This agency began its activities on March 2, 2015.

- *Mexican Oil Fund:* Pursuant to the Mexican Petroleum Fund for Stabilization and Development Law, the *Fondo Mexicano del Petróleo para la Estabilización y el Desarrollo* (Mexican Petroleum Fund for Stabilization and Development) was created as a federal public trust and began operating on January 1, 2015. The fund is entrusted with receiving, administering and distributing the income that the Mexican Government derives from exploration and production activities carried out under assignments or agreements, excluding any tax revenues generated as a result of these activities. This public trust will first use the income to make the payments required pursuant to the various assignments or agreements; it will then transfer part of the income to various funds that finance public expenses and will allocate the remaining funds to long-term savings, including investments in financial assets. The *Banco de México* (the Mexican central bank) is the trustee of the fund, and the allocation of the fund's assets is supervised by a technical committee composed of the Secretary of Energy, the Secretary of Finance and Public Credit, the Governor of *Banco de México* and four independent members.
- *Anticorruption:* The Secondary Legislation, including the Hydrocarbons Law, includes provisions aimed at preventing and sanctioning corruption through the supervision and, if necessary, investigation and prosecution of entities, individuals and public officials participating in the Mexican energy sector.
- *Pension Liabilities:* The Secondary Legislation enables the Mexican Government to assume a portion of our unfunded reserve for retirement pensions and seniority premiums, subject to certain conditions, among which was our agreement to change the pension regime applicable to current and new employees. For more details on our recent agreement with the Petroleum Workers' Union, see "Item 6—Directors, Senior Management and Employees—Employees."

## **Assignment of Exploration and Production Rights**

### *Round Zero*

The Ministry of Energy, with technical assistance from the NHC, evaluated our request to be assigned oil and gas exploration and production rights in certain areas based on our technical, financial and operational capabilities, in accordance with the Energy Reform Decree. On August 13, 2014, the Ministry of Energy published the results of Round Zero under which we were assigned rights to 95.9% of the proved reserves that we requested. Pursuant to the Hydrocarbons Law, the Ministry of Energy may assign, on an exceptional basis, additional exploration and production areas to *Petróleos Mexicanos* or other productive state-owned companies.

In connection with the Round Zero assignments, the Ministry of Energy authorized our exploration plans for the areas in which we had made commercial investments or discoveries, as well as our development plans for the extraction of hydrocarbons in producing fields. Our rights to continue conducting exploration and production activities in the areas assigned to us are subject to certain terms and conditions set forth in the assignment deeds granted by the Mexican Government. The assignment deeds governing our exploration areas require, among other things, that we carry out exploration activities in accordance with the authorized plan for an exploration area within the first three years of receiving the assignment; this initial period may be extended for two additional years, depending on the technical characteristics of the area, our compliance with the authorized exploration plan and our results. If a commercial discovery is made during this initial exploration phase, the assignment deeds provide that we may submit to the NHC a development plan for the extraction of hydrocarbons from the area. Upon NHC approval, we may then carry out extraction activities in accordance with our development plan. The assignment deeds governing the majority of our production areas grant us the right to carry out extraction activities for a 20-year period, subject to the requirement that we comply with the authorized development plan for a production area within the time period specified by the NHC. Our remaining production areas, which together contain approximately 398 million barrels of oil equivalent of proved reserves, were temporarily assigned to us for a two-year period in

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order to ensure the continuity of operations at these producing fields until they are subject to a competitive bidding round. The assignment deeds governing both our exploration and production areas include mechanisms by which the Ministry of Energy may revoke its assignments to us and retake the underlying areas.

The Hydrocarbons Law provides that once a particular area is assigned to us, we may request permission from the Ministry of Energy to migrate the assignment into the new contractual regime, which the Ministry of Energy will create with technical assistance from the NHC. If, in connection with the migration of an assignment, we decide to enter into a partnership or strategic joint venture with another company, commonly referred to as a “farm-out,” for the exploration and development of the underlying area, the NHC will conduct a public tender in order to select our partner in accordance with technical guidelines set forth by the Ministry of Energy. The Ministry of Energy will seek a favorable opinion from us with respect to the experience and the technical, financial and operational qualifications that a bidder must meet in order to participate in the bidding process, and will also consult with us on the financial terms established by the Ministry of Finance and Public Credit.

In addition, Pemex Exploration and Production may amend its Integrated Exploration and Production Contracts (which we refer to as Integrated E&P Contracts) and Financed Public Works Contracts (which we refer to as FPWCs) in order to align these contracts, which were entered into prior to the enactment of the Secondary Legislation, with the new contractual framework established under the Hydrocarbons Law. Accordingly, an existing Integrated E&P Contract or FPWC may be migrated into a contract for exploration and production upon agreement by the contract parties if the technical guidelines established by the Ministry of Energy (after having sought our opinion) and the fiscal terms determined by the Ministry of Finance and Public Credit are acceptable to both parties. Upon approval by the contract parties, the existing Integrated E&P Contract or FPWC will be replaced by the new contract for exploration and production without the need for a bidding process. If the contract parties do not agree to the proposed technical guidelines and financial terms, the original Integrated E&P Contract or FPWC will remain valid and unmodified.

For more information regarding these contracts, please see “—Business Overview—Exploration and Production—Integrated Exploration and Production Contracts and Financed Public Works Contracts” below in this Item 4.

### *Competitive Bidding Rounds*

In December 2014, the Ministry of Energy launched Round One, pursuant to which the areas that we did not request or were not assigned to us through Round Zero (including the areas assigned to us on a temporary basis) are to be subject to bidding by us and other companies, subject to certain requirements. Round One is expected to include a total of 169 blocks—109 exploration blocks and 60 production blocks—covering an aggregate area of approximately 28,500 square kilometers. We plan to participate in Round One, as well as in subsequent competitive bidding rounds.

As part of Round One, the NHC is conducting competitive bidding rounds in order to determine the partners with which we may enter into farm-out agreements for the exploration and development of certain areas that were assigned to us through Round Zero. In March 2016, we modified our partnership strategy in light of current market conditions in the oil and gas industry. In the short term, we have identified three key opportunities for joint ventures in the mature onshore fields of Ogarrio, Cárdenas-Mora and Rodador. The Ministry of Energy has already approved the migration process of these three opportunities, and we anticipate that the bidding process to select our partners will follow soon. The selected areas were identified based on their profitability and production prospects. We have also considered farm-outs for the Samaria, Bolontikú-Sinán, Ek-Balam, Ayatsil-Tekel-Utsil, Kunah-Piklis, Trión, Maximino and Exploratus fields, but will revisit these prospects before moving forward with the relevant regulatory process.

As of the date of this annual report, we have not yet participated in Round One. We do plan to participate in the fourth bidding round of Round One, which will include ten exploratory areas located in the Perdido Fold Belt Basin and the Salt Basin of the deepwaters of the Gulf of Mexico.



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*New Fiscal Regime*

The Hydrocarbons Revenue Law that was adopted as part of the Secondary Legislation sets forth, among other things, the fiscal terms to be established with respect to the contracts for exploration and production granted by the Mexican Government to us or to other companies. For more information regarding the new fiscal regime, see “—Taxes, Duties and Other Payments to the Mexican Government—Fiscal Regime” below in this Item 4.

**Capital Expenditures and Investments**

The following table shows our capital expenditures, excluding maintenance, for each of the five years ended December 31, 2015, and the budget for these expenditures for 2016. Capital expenditure amounts are derived from our budgetary records, which record these amounts on a cash basis. Accordingly, these capital expenditure amounts do not correspond to capital expenditure amounts included in our consolidated financial statements prepared in accordance with IFRS. The following table presents our capital expenditures by subsidiary. For the year ended December 31, 2015, we have included capital expenditures made by the subsidiary entities prior to our recent corporate reorganization, and for the new productive state-owned subsidiaries, capital expenditures made after their creation. The 2016 budget for expenditures presents expected expenditures of the new productive state-owned subsidiaries.

**Capital Expenditures by Subsidiary**

	Year ended December 31,					Budget 2016 <sup>(1)</sup>
	2011	2012	2013	2014	2015	
			(in millions of pesos) <sup>(2)</sup>			
Pemex-Exploration and Production <sup>(3)</sup>	Ps. 177,059	Ps. 193,801	Ps. 212,556	Ps. 222,069	Ps. 153,110	Ps. 121,818
Pemex-Refining	25,157	28,944	29,794	39,767	34,152	—
Pemex-Gas and Basic Petrochemicals	3,019	4,468	5,405	7,549	5,070	—
Pemex-Petrochemicals	2,426	2,892	4,003	4,765	2,604	—
Pemex Industrial Transformation	—	—	—	—	4,952	21,369
Pemex Logistics	—	—	—	—	631	4,449
Pemex Ethylene	—	—	—	—	426	1,786
Pemex Drilling and Services	—	—	—	—	—	1,421
Pemex Fertilizers	—	—	—	—	205	444
Petróleos Mexicanos	717	943	1,707	3,006	2,157	5,422
<b>Total capital expenditures</b>	<b>Ps. 208,378</b>	<b>Ps. 231,048</b>	<b>Ps. 253,465</b>	<b>Ps. 277,156</b>	<b>Ps. 203,307</b>	<b>Ps. 156,709</b>

Note: Numbers may not total due to rounding.

(1) Amended budget, authorized on March 31, 2016 and informed to the Board of Directors of Petróleos Mexicanos on April 5, 2016.

(2) Figures for 2011, 2012, 2013, 2014 and 2015 are stated in nominal pesos. Figures for 2016 are stated in constant 2016 pesos.

(3) For the year ended December 31, 2015, this includes capital expenditures made by Pemex-Exploration and Production and the new productive state-owned subsidiary Pemex Exploration and Production. The 2016 budget amounts correspond to Pemex Exploration and Production.

Source: *Petróleos Mexicanos*.

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The following table shows our capital expenditures, excluding maintenance, by segment for the year ended December 31, 2015 and the budget for these expenditures in 2016.

#### Capital Expenditures by Segment

	<u>Year ended December 31,</u> <u>2015</u>	<u>Budget</u> <u>2016<sup>(1)</sup></u>
	(millions of pesos)	
Exploration and Production <sup>(2)</sup>	Ps. 151,546	Ps. 121,576
Refining <sup>(3)</sup>	29,646	18,919
Gas and Basic Petrochemicals <sup>(4)</sup>	5,160	2,093
Petrochemicals <sup>(5)</sup>	494	357
Drilling and Services <sup>(6)</sup>	1,564	1,663
Logistics <sup>(7)</sup>	9,827	4,449
Fertilizers <sup>(8)</sup>	1,044	444
Ethylene <sup>(9)</sup>	1,869	1,786
Corporate and other Subsidiaries	2,157	5,422
Total Capital Expenditures	Ps. 203,307	Ps. 156,709

Note: Numbers may not total due to rounding.

(1) Amended budget, as approved by the Board of Directors of Petróleos Mexicanos on February 26, 2016.

(2) Figures for the exploration and production segment for the year ended December 31, 2015 include capital expenditures related to the drilling and services segment until the formation of Pemex Drilling and Services on August 1, 2015 and to the logistics segment until the formation of Pemex Logistics on October 1, 2015.

(3) Figures for the refining segment for the year ended December 31, 2015 are allocated to the budget for Pemex Industrial Transformation.

(4) Figures for the gas and petrochemicals segment for the year ended December 31, 2015 are allocated to the budget for Pemex Industrial Transformation.

(5) Figures for the petrochemicals segment for the year ended December 31, 2015 include capital expenditures related to the ethylene segment until the formation of Pemex Ethylene on October 1, 2015 and to the fertilizers segment until the formation of Pemex Fertilizers on October 1, 2015. Figures for the petrochemicals segment for the year ended December 31, 2015 are allocated to the budget for Pemex Industrial Transformation.

(6) Figures for the drilling and services segment for the year ended December 31, 2015 refer to capital expenditures since August 1, 2015, when Pemex Drilling and Services was formed.

(7) Figures for the logistics segment for the year ended December 31, 2015 refer to capital expenditures since October 1, 2015, when Pemex Logistics was formed.

(8) Figures for the fertilizers segment for the year ended December 31, 2015 refer to capital expenditures since October 1, 2015, when Pemex Fertilizers was formed.

(9) Figures for the ethylene segment for the year ended December 31, 2015 refer to capital expenditures since October 1, 2015, when Pemex Ethylene was formed.

Source: Petróleos Mexicanos.

#### Total Capital Expenditures

The following table sets forth our total capital expenditures by project, excluding maintenance, for the five years ended December 31, 2015, as well as the budget for such expenditures for 2016.

#### Total Capital Expenditures

	<u>Year ended December 31,<sup>(1)</sup></u>					<u>Budget 2016<sup>(2)</sup></u>
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	
	(in millions of pesos) <sup>(3)</sup>					
<b>Exploration and Production</b>						
Ku-Maloob-Zaap	Ps. 21,554	Ps. 22,720	Ps. 29,738	Ps. 34,232	Ps. 23,507	Ps. 20,316
Tsimin-Xux <sup>(4)</sup>	—	—	13,312	19,638	13,950	9,333
Cantarell <sup>(5)</sup>	36,303	42,139	28,171	18,276	11,217	11,903
Chuc <sup>(6)</sup>	3,730	7,870	9,897	10,618	10,037	8,231
Crudo Ligero Marino <sup>(4)(7)</sup>	—	—	10,000	12,829	9,275	7,081
Integral Yaxché	1,986	2,485	3,858	4,695	6,649	8,033
Burgos	19,564	17,324	10,316	11,695	5,855	3,294
Antonio J. Bermúdez <sup>(5)(8)</sup>	11,218	13,126	11,489	8,840	5,352	3,357
Delta del Grijalva	6,501	5,671	6,169	5,348	4,687	3,088
Ogarrio-Sánchez Magallanes <sup>(8)</sup>	—	—	6,693	7,020	4,626	3,691
Bellota-Chinchorro <sup>(9)</sup>	4,912	3,101	3,607	3,739	4,070	2,728

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	Year ended December 31, <sup>(1)</sup>					Budget 2016 <sup>(2)</sup>
	2011	2012	2013	2014	2015	
Lakach	128	194	1,829	6,141	3,079	5,573
Aceite Terciario del Golfo	21,919	20,864	20,049	18,943	2,817	3,345
Ek-Balam	725	1,023	2,549	5,304	2,722	687
Cactus-Sitio Grande <sup>(4)(10)</sup>	1,995	2,544	4,208	3,928	2,671	2,128
El Golpe-Puerto Ceiba	1,274	2,691	3,708	4,148	2,605	1,929
Veracruz Basin <sup>(4)</sup>	—	—	3,703	4,262	1,538	626
Ixtal-Manik <sup>(4)</sup>	—	—	1,631	1,815	1,439	1,572
Ayín-Alux	591	56	34	789	1,161	603
Jujo-Tecominoacán <sup>(5)</sup>	3,658	3,555	3,336	1,680	847	1,675
Cuenca de Macuspana <sup>(4)</sup>	—	—	614	874	476	524
Tamaulipas-Constituciones	3,800	3,313	2,736	1,205	459	859
Integral Poza Rica	4,687	4,948	1,721	1,695	438	868
Costero Terrestre <sup>(4)</sup>	—	—	516	1,110	321	334
Arenque <sup>(5)</sup>	1,159	1,241	1,696	708	26	24
Lankahuasa <sup>(4)</sup>	—	—	37	33	—	32
Strategic Gas Program <sup>(4)(5)</sup>	27,790	29,870	1,394	—	—	—
Och-Uech-Kax <sup>(7)</sup>	1,084	964	80	—	—	—
Carmito-Artesa <sup>(10)</sup>	319	611	30	—	—	—
Caan <sup>(6)</sup>	658	1,093	27	—	—	—
Cárdenas <sup>(9)</sup>	226	4	—	—	—	—
Other Exploratory Projects <sup>(5)(11)(12)</sup>	—	4,208	28,070	31,403	31,146	19,001
Other Development Projects	—	—	—	21	17	—
Administrative and Technical Support	1,280	2,188	1,338	1,078	557	741
Total	177,059	193,801	212,556	222,069	151,546	121,576
<b>Refining</b>						
Fuel Quality Investments <sup>(13)</sup>	6,571	6,558	5,568	7,814	9,045	5,725
Reconfiguration of Miguel Hidalgo Refinery in Tula	—	—	253	1,077	4,674	2,195
Residual Conversion from Salamanca Refinery	78	155	927	1,310	913	117
New Refinery in Tula <sup>(14)</sup>	60	446	2,463	1,128	561	1
Tuxpan Pipeline and Storage and Distribution Terminals	770	597	255	275	100	57
Minatitlán Refinery Reconfiguration	2,850	5,366	—	—	—	—
Others	14,827	15,822	20,328	28,163	14,353	10,824
Total	25,157	28,944	29,794	39,767	29,646	18,919
<b>Gas and Basic Petrochemicals</b>						
Modernization of Transportation Areas of GPCs	—	—	155	252	534	384
Electric Reliability Integral Projects at GPCs	—	—	—	240	474	117
Modernization of Measuring, Control and Security Systems of GPCs	—	284	273	187	463	301
Modernization and Rehabilitation of Facilities of Water Supply and Water Treatment						
System Facilities at Nuevo Pemex GPC	—	29	47	117	344	233
Adaptation of Fractionation Plants and Conversion of Liquids Sweetener at Nuevo Pemex GPC	—	8	53	880	320	157
Conditioning Facilities for Ethane Supply at Cactus GPC	—	—	105	313	234	35
Security Requirements for the Improvement of Operational Reliability of the GPCs	—	7	—	74	211	28
Conservation and Modernization of the Storage Area at Coatzacoalcos Area GPC	—	20	71	286	208	84
Refurbishment of Refrigerating and Ethane Turbocompressors of Fractionating Plants at Nuevo Pemex GPC	—	—	—	—	199	55
Conservation of Operational Reliability at Ciudad Pemex GPC	53	150	—	352	196	29
Conservation of Processing Capacity at Nuevo Pemex GPC	228	268	237	504	180	10
Refurbishment and Modernization of Natural Gas Turbocompressors of the Cryogenic Plants at Nuevo Pemex GPC	—	—	—	27	143	232

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	Year ended December 31, <sup>(1)</sup>					Budget 2016 <sup>(2)</sup>
	2011	2012	2013	2014	2015	
Integral Facilities Maintenance at Cactus GPC	—	—	—	113	137	3
Integral Maintenance of Gas Sweetening Plants 1, 2, 3 and 12 at Cactus GPC	—	—	—	30	109	59
Conditioning of the Venting Systems at Cactus GPC	—	41	—	—	109	24
Others	2,738	3,661	4,464	4,174	1,299	342
Total	3,019	4,468	5,405	7,549	5,160	2,093
<b>Petrochemicals</b>						
Infrastructure for Maintenance and Industrial Service Areas	—	—	24	173	111	13
Efficiency in Storage and Distribution I	82	82	221	142	102	85
Maintaining the Production Capacity of the Feed Stock Conditioning I at Cangrejera PC	56	63	41	68	52	4
Maintenance of Styrene-Ethylbenzene Plant	—	—	17	168	48	13
Modernization and Expansion of Production Capacity of Aromatics Train I at Cangrejera PC	941	777	495	539	29	4
Maintaining the Production Capacity of the Feed Stock Conditioning II at Cangrejera PC	—	—	15	75	14	153
Others	1,347	1,970	3,190	3,600	138	85
Total	2,426	2,892	4,003	4,765	494	357
<b>Logistics<sup>(15)</sup></b>						
Evaluation and Rehabilitation of the Mechanical Integrity of the Nuevo Teapa-Madero-Cadereyta Pipelines					574	179
Implementation of the SCADA System in 47 Pipeline Transportation Systems					520	143
Evaluation and Rehabilitation of the Mechanical Integrity of the Jet Fuel Pipelines, Diesel Pipelines, Magna and Premium Gasoline Pipelines, Fuel Oil Pipelines and Gas Pipelines in the Central Zone					464	24
Evaluation and Rehabilitation of the Mechanical Integrity of the Poza Rica-Salamanca and Nuevo Teapa- Tula-Salamanca Pipelines					461	87
Maintenance of Safety, Measurement, Control and Automation Systems in Storage and Distribution Terminals					460	463
Larger, Modernized Fleet					458	230
Natural Gas Transportation from Jáltipan to Salina Cruz Refinery					403	23
Renewal of Tugs, Chalanés and Multipurpose Vessels of the Smaller Fleet					401	129
Acquisition of Five Tankships by Cash and/or By Leasing					363	204
Maintenance of Marine Facilities					316	19
Integral Maintenance of Pipeline Systems for Natural Gas and LPG, Stage II					293	152
Modernization of the Instrumented Security and Basic Control Systems of the Pumping Stations and Product Receipt Northern Zone					278	73
Replacement of Vessel Tanks Nuevo Pemex I, II, III and IV by Acquisition and/or Leasing					278	142

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	Year ended December 31, <sup>(1)</sup>					Budget 2016 <sup>(2)</sup>
	2011	2012	2013	2014	2015	
Evaluation and Rehabilitation of the Mechanical Integrity of the Pipelines and Fuel Oil Pipelines in Northern and Pacific Zones					271	166
Refurbishment, Modification and Modernization of Pumping and Compression Stations Nationwide					221	458
Others					4,066	1,957
Total					9,827	4,449
<b>Drilling and Services<sup>(15)</sup></b>						
Acquisition of Two Modular Drilling Rigs					723	78
Acquisition of Two Jack-Up Platforms					553	482
Acquisition of Nine Land-Based Drilling Rigs					288	227
Acquisition and Modernization of Equipment for the Drilling and Repair of Wells					—	714
Acquisition of Two Modular Drilling Rigs					—	162
Total					1,564	1,663
<b>Ethylene<sup>(15)</sup></b>						
Modernization and Expansion of Production Capacity of the Ethane Derivatives Chain I at Morelos PC					402	—
Modernization and Optimization of Infrastructure and Auxiliary Services I at Cangrejera PC					277	—
Safety and Environmental Protection Based on Observations and Regulations IV at Morelos PC					114	35
Maintaining Production Capacity of the Low Density Polyethylene Plant					112	226
Modernization of Fire Protection Network at Cangrejera PC					102	43
Maintaining the Production Capacity of Ethylene Plant 2013-2015 at Morelos PC					93	158
Maintaining the Production Capacity of Ethane Derivatives Chain II at Morelos PC					87	20
Maintaining the Production Capacity of Auxiliary Services II					78	75
Maintaining the production capacity of Auxiliary Services III					59	33
Maintaining the Production Capacity of the Ethane Derivatives Chain III at Morelos PC					54	—
Maintaining the Production Capacity of Auxiliary Services at Morelos PC					48	86
Modernization and Optimization of Auxiliary Services Infrastructure I at Morelos PC					5	199
Maintaining the Production Capacity of the Swing plant 2015-2017 at Morelos PC					7	149
Maintaining the Production Capacity of the Mitsui plant 2015-2017 at Morelos PC					4	123
Maintenance and Optimization of the Refrigerated Terminal Operation Capacity of Ethylene, TREEP I and II at Pajaritos PC					—	101
Maintaining the Production Capacity of Ethylene Oxide Plant 2015-2017 at Morelos PC					1	79
Others					426	459
Total					1,869	1,786

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	Year ended December 31, <sup>(1)</sup>					Budget 2016 <sup>(2)</sup>
	2011	2012	2013	2014	2015	
<b>Fertilizers<sup>(15)</sup></b>						
Rehabilitation of Ammonia Plant IV and Integration and Auxiliary Services for Cosoleacaque PC					791	206
Maintaining the Production Capacity of Ammonia Plant VII and its Auxiliary Services at Cosoleacaque PC					101	99
Maintaining the Production Capacity of Ammonia Plant VI at Cosoleacaque PC					97	35
Safety and Environmental Protection, Derived from Observations and Regulations II in Cosoleacaque PC					43	104
Others					12	—
Total					1,044	444
<b>Petróleos Mexicanos</b>						
Total	717	943	1,707	3,006	2,157	5,422
<b>Total capital expenditures</b>	<u>Ps. 208,378</u>	<u>Ps. 231,048</u>	<u>Ps. 253,465</u>	<u>Ps. 277,156</u>	<u>Ps. 203,307</u>	<u>Ps. 156,709</u>

Notes: Numbers may not total due to rounding.

GPC = Gas Processing Complex.

PC = Petrochemical Complex.

(1) Amounts based on cash basis method of accounting.

(2) Amended budget, authorized on March 31, 2016 and informed to the Board of Directors of Petróleos Mexicanos on April 5, 2016.

(3) Figures for 2011, 2012, 2013, 2014 and 2015 are stated in nominal pesos. Figures for 2016 are stated in constant 2016 pesos.

(4) As of January 1, 2013, the Veracruz Basin, Lankahuasa, Costero Terrestre, Crudo Ligero Marino, Ixtal-Manik, Cuenca de Macuspana and Tsimin-Xux projects (projects formerly supported by the Strategic Gas Program project resources) were designated as separate projects and funds were allocated to them as stand-alone projects and the San Manuel project (a project formerly supported by the Strategic Gas Program project resources) was separated from the Strategic Gas Program and was merged into the Cactus-Sitio Grande project.

(5) As of January 1, 2013, the Antonio J. Bermúdez, Arenque, Cantarell, Jujo-Tecominoacán and Strategic Gas Program exploratory projects, which formerly constituted an exploratory component, were designated as separate projects and funds were allocated to them as stand-alone projects.

(6) As of January 1, 2013, the Caan project was merged into the Chuc project.

(7) As of January 1, 2013, the Och-Uech-Kax project was merged into the Crudo Ligero Marino project.

(8) As of January 1, 2013, the Ogarrio-Sánchez Magallanes project was separated from the Antonio J. Bermúdez project.

(9) As of January 1, 2012, the Cárdenas project was merged into the Bellota-Chinchorro project.

(10) As of January 1, 2013, the Carmito Artesa project was merged into the Cactus-Sitio Grande project.

(11) As of January 1, 2012, the Campeche Oriente exploratory project (a project formerly supported by Ku-Maloob-Zaap project resources) and the Comacalco exploratory project (a project formerly supported by Bellota-Chinchorro project resources) were designated as separate projects and funds were allocated to them as stand-alone projects.

(12) As of January 1, 2013, the Alosa, Chalabil, Cuichapa, Han, Holok, Lebranche, Oyamel, Pakal, Área Perdido, Tlancanán and Uchukil exploratory projects were designated as separate projects and funds were allocated to them as stand-alone projects.

(13) Includes clean fuels investments for gasoline and diesel in our six refineries.

(14) Includes pre-investments studies, on-site preparation and other expenses related to this project.

(15) Prior to our recent corporate reorganization, projects in our logistics, drilling and services, ethylene and fertilizers segments were aggregated in the line item "Other" in our summary of capital expenditures and were not separately disclosed. Following our recent corporate reorganization, we are disclosing for the listed projects in these segments, on an individual basis, the capitalization expenditure amounts for the year ended December 31, 2015 and budget amounts for 2016.

Source: *Petróleos Mexicanos*.

### Capital Expenditures Budget

Since mid-2014, the international reference prices of crude oil have fluctuated significantly. During 2015, the Mexican crude oil export price fell to U.S. \$26.54 per barrel and the weighted average price for the year was U.S. \$43.29 per barrel. Based on its estimate that the weighted average Mexican crude oil export price would be U.S. \$50.00 per barrel, the Mexican Congress initially approved our Ps. 293.0 billion capital expenditures budget, including maintenance, for 2016.

In February 2016, the weighted average Mexican crude oil export price was approximately U.S. \$31.51 per barrel. Given this significant decrease in oil prices and adverse global economic conditions, the Mexican Government announced that it would cut public spending by approximately Ps. 132.0 billion in 2016.

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Accordingly, on February 26, 2016, the Board of Directors of Petróleos Mexicanos approved a Ps. 100.0 billion, or 20.9%, budget reduction in order to meet our financial balance goal, approximately 80% for capital expenditures and 20% for operating expenses. This budget adjustment is expected to result in delays of certain projects, however, we expect to maintain our medium- and long-term growth plans without the need to incur more indebtedness than the amount included in our approved financing program for 2016. The budget adjustment approved by the Board of Directors of Petróleos Mexicanos was based on the guiding principles of: maintaining the industrial safety and reliability of our facilities; taking advantage of the new contractual models provided by the recent energy reform in order to attract third-party investment; meeting our labor and financial obligations; and stabilizing our crude oil and gas production levels in the medium and long-term.

Our revised budget for 2016 includes a total of Ps. 156.7 billion in constant 2016 pesos for capital expenditures. We expect to direct Ps. 121.6 billion (or 77.6% of our total capital expenditures) to exploration and production programs in 2016. This significant investment in exploration and production activities reflects our focus on maximizing the potential of hydrocarbon reserves as we begin operating under the new framework established by the Secondary Legislation. The recent energy reform provides us with opportunities to form new strategic partnerships in order to enhance our financial, technical and operational capabilities along our entire value chain. See “—Recent Energy Reform” above in this Item 4. Our ability to finance our budgeted capital expenditures for 2016 may be negatively impacted by constraints on our liquidity.

In light of (1) the current state of the oil and gas industry, which affects hydrocarbon prices and the demand for our products, (2) our corporate reorganization carried out in accordance with the recent energy reform and (3) the effect of budget cuts on our capital expenditures for 2016, we are currently assessing our project portfolio for the short-, medium- and long-term. Therefore, we have not included in this annual report our budgeted amounts of capital expenditures for 2017-2019.

We continuously review our capital expenditures portfolio in accordance with our current and future business plans and upcoming opportunities. In the upcoming years, we expect to receive financial resources from third parties who may partner with us on certain projects, a collaboration made possible following the implementation of the Secondary Legislation. See “—Recent Energy Reform” above in this Item 4 for more information about these new opportunities.

Our main objectives for upstream investment are to maximize our long-term economic value, and to increase and improve the quality of the oil and gas reserves assigned to us, enhance Pemex Exploration and Production’s reserves recovery ratio, improve the reliability of its production and transportation infrastructure for crude oil and natural gas operations and continue to emphasize industrial safety and compliance with environmental regulations. Our 2016 budget objectives include maintaining crude oil production at levels sufficient to satisfy domestic demand and have a surplus available for export and maintaining natural gas production levels in order to attempt to satisfy domestic demand and avoid increasing our dependence on natural gas imports.

Our downstream investment program seeks to improve the quality of our product selection and the reliability of our logistics and distribution services, to achieve a level of efficiency similar to that of our international competitors and to continue to emphasize industrial safety and environmental compliance.

## **BUSINESS OVERVIEW**

### **Overview by Business Segment**

#### *Exploration and Production*

Our exploration and production segment, which formerly operated through Pemex-Exploration and Production and now operates through the newly-formed productive state-owned subsidiary Pemex Exploration and Production, explores for and produces crude oil and natural gas, primarily in the northeastern and southeastern regions of Mexico and offshore in the Gulf of Mexico. In nominal peso terms, our capital expenditures in exploration and production activities decreased by 31.1% in 2015. As a result of our investments in previous years, our total hydrocarbon production reached a level of approximately 1,193.1 million barrels of oil equivalent in 2015. Despite these investments, our crude oil production decreased by 6.7% from 2014 to 2015, averaging 2,266.8 thousand barrels per day in 2015, primarily as a result of the decline of the Cantarell, Crudo Ligero Marino, El Golpe-Puerto Ceiba, Complejo Antonio J. Bermúdez and Cactus-Sitio Grande projects, which was partially offset by development activities in the Samaria Luna, Cinco Presidentes, Bellota-Jujo, Poza Rica, Macuspana-Muspac and Litoral de Tabasco projects, as well as by repairs, stimulations and diversification of artificial systems at our onshore fields that helped maintain production levels.

Our natural gas production (excluding natural gas liquids) decreased by 2.0% from 2014 to 2015, averaging 6,401 million cubic feet per day in 2015. This decrease in natural gas production resulted primarily from decreased volumes in the Burgos, Crudo Ligero Marino, Chuc, Integral Veracruz Basin and Macuspana-Muspac business units, as well as the Delta del Grijalva project. Exploration drilling activity increased by 8.3% from 2014 to 2015, from 24 exploratory wells completed in 2014 to 26 exploratory wells completed in 2015.

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Development drilling activity decreased by 44.0% from 2014 to 2015, from 511 development wells completed in 2014 to 286 development wells completed in 2015. In 2015, we completed the drilling of 312 wells in total. Our drilling activity in 2015 was focused on increasing the production of associated gas in the ATG and Ogarrio-Sánchez Magallanes projects and of crude oil in the Cantarell, Antonio J. Bermúdez, Cactus-Sitio Grande, Ku-Maloob-Zaap and Tsimin-Xux projects.

Our primary objectives in 2016 include: (1) generating economic value and profitability for the Mexican State; (2) exploring and extracting oil and solid, liquid or gaseous hydrocarbons in Mexico, its exclusive economic zone and abroad; (3) increasing inventory reserves through new discoveries and reclassifications; (4) increasing production of hydrocarbons; (5) optimally allocating resources for our projects and continuously evaluating their performance; (6) supplying the Mexican market with energy at competitive prices while ensuring quality and efficiency throughout our production chain; (7) increasing efficiency levels above international standards in our gas utilization and production costs; (8) making best use of our investments and logistics capacity and minimizing operating costs; (9) maximizing the value of international opportunities; and (10) improving our performance in industrial safety and environmental protection. Our upstream investment program seeks to meet these objectives by maximizing the value of produced reserves, improving the quality of our product selection and improving the reliability of our logistics and distribution services to achieve an optimal level of efficiency, while continuing to emphasize industrial safety and environmental compliance. Our production goals for 2016 include producing crude oil at a level of approximately 2,129.7 thousand barrels per day and maintaining natural gas production above 5,801.1 million cubic feet per day in order to satisfy domestic demand for natural gas. We aim to meet these production goals through exploration and development activities, increasing inventory reserves through new discoveries and reclassifications, managing the decline in field production by applying primary, secondary and enhanced oil recovery processes, developing extra-heavy crude oil fields and by maintaining our infrastructure and equipment.

### *Refining*

Our refining segment, which formerly operated as Pemex-Refining and now operates through the newly-formed productive state-owned subsidiary Pemex Industrial Transformation, converts crude oil into gasoline, jet fuel, diesel, fuel oil, asphalts and lubricants. We also distribute and market most of these products throughout Mexico, where we experience significant demand for our refined products. At the end of 2015, atmospheric distillation refining capacity reached 1,640 thousand barrels per day. In 2015, we produced 1,114 thousand barrels per day of refined products as compared to 1,206 thousand barrels per day of refined products in 2014. This 7.6% decrease in refined products production was mainly due to a decrease in crude oil processing and to operational issues in the national refining system.

Our primary goal for 2016 is to increase production of petroleum products, which we expect will result from an increase in distillate production and a decrease in fuel oil production.

### *Gas and Basic Petrochemicals*

Our gas and basic petrochemicals segment, which formerly operated as Pemex-Gas and Basic Petrochemicals and now operates through the newly-formed productive state-owned subsidiary Pemex Industrial Transformation, processes wet natural gas in order to obtain dry natural gas, liquefied petroleum gas (LPG) and other natural gas liquids. In 2015, our total sour natural gas processing capacity remained at 2014 levels of 4,523 cubic feet per day. We processed 4,073 million cubic feet of wet natural gas per day in 2015, a 6.2% decrease from the 4,343 million cubic feet per day of wet natural gas processed in 2014. We produced 327 thousand barrels per day of natural gas liquids in 2015, a 10.2% decrease from the 364 thousand barrels per day of natural gas liquids production in 2014. We also produced 3,398 million cubic feet of dry gas (which is natural gas with a methane content of more than 90.0%) per day in 2015, 6.7% less than the 3,640 million cubic feet of dry gas per day produced in 2014.

In 2016, we expect to have a lower supply of natural gas from our fields, which would require us to import higher volumes of natural gas to satisfy domestic demand. In 2016, we also expect to increase ethane production in response to higher demand, and for our production of natural gas liquids to increase.



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*Petrochemicals*

The operations of our petrochemicals segment, which formerly operated as Pemex-Petrochemicals, have since been assumed by three productive state-owned subsidiaries: Pemex Industrial Transformation, Pemex Ethylene and Pemex Fertilizers. We manufacture different petrochemical products, including: (1) methane derivatives, such as ammonia and methanol; (2) ethane derivatives, such as ethylene, polyethylene, vinyl chloride monomer, ethylene oxide and glycols; (3) aromatics and their derivatives, such as styrene, toluene, benzene and xylene; (4) the propylene chain and its derivatives, such as acrylonitrile and propylene; (5) the petroleum derivatives chain, such as octane base gasoline and heavy naphtha; and (6) other products such as oxygen, nitrogen and pentanes.

Our total annual production (excluding ethane and butane gases) decreased by 16.5% in 2015, from 7,238 thousand tons in 2014 to 6,041 thousand tons in 2015, primarily as a result of decreased production of ammonia and carbonic anhydride in our Cosoleacaque Petrochemical Complex, as well as decreased supply of natural gas following the explosion of the Abkatún-A Permanente Platform in April 2015. For more information, see “—Environmental Regulation—PEMEX’s Internal Monitoring.”

*Fertilizers*

Our fertilizers segment operates through the productive state-owned subsidiary Pemex Fertilizers, which was created effective August 1, 2015 and assumes the fertilizer assets of Pemex-Petrochemicals. This segment integrates the ammonia production chain up to the point of sale of fertilizers.

Our goals are to produce, distribute and market ammonia, fertilizers and its derivatives, and to provide related services under four of our business units: (1) for our financial units, to increase the economic value of our segment by directing ammonia production to more profitable markets and by ensuring efficient spending; (2) for our customer units, to increase the quantity and quality of our products, to provide our customers with products in accordance with their needs, to increase accessibility by moving closer to areas with high demand and to add to our existing portfolio of products; (3) for our processes units, to increase operational reliability and to reduce production costs, as well as to increase efficiency of production processes and safety while complying with environmental regulations; and (4) for our learning and growth units, optimizing our projects portfolio to maintain the reliability of our facilities and to evaluate partnerships with leading companies in the industry.

*Ethylene*

Our ethylene segment operates through the productive state-owned subsidiary Pemex Ethylene, which was created effective August 1, 2015, and assumes the ethylene line of business from Pemex-Petrochemicals in order to take advantage of the integration of the ethylene production chain.

We have two primary goals for 2016. The first is to better market our products and services to certain customers, mainly by (1) becoming a reliable supplier, adopting competitive business practices, focusing on profitable and abandoning unprofitable markets; and (2) evaluating strategic business relationships and partnerships to increase the profitability of our petrochemical processes. The second is to streamline our activities and operations in Pemex Ethylene’s value chain by following the best operational and maintenance practices.

*Drilling and Services*

Our drilling and services segment operates through the productive state-owned subsidiary Pemex Drilling and Services, which was created effective August 1, 2015 and has assumed the functions of the drilling business unit of Pemex-Exploration and Production, the equipment and contracts of which were transferred to the newly created company. This segment provides drilling, completion, work-over and other services for wells in offshore and onshore fields. In 2015, this segment only provided services to Pemex Exploration and Production but it also intends to provide services to third parties in Mexico and is pursuing partnerships and other means to increase business with private sector companies.

Our well drilling activities during 2015 led to significant onshore discoveries. Our main discoveries were of crude oil reserves located in the Southeastern and Veracruz basins, specifically in the Northern and Southern regions. Exploration activity in the Northern region also led to the discovery of additional non-associated gas reserves in the Burgos basin. We are currently working on development plans for these new reserves.

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### *Logistics*

Our logistics segment operates through the productive state-owned subsidiary Pemex Logistics, which was created effective October 1, 2015. It provides land, maritime and pipeline transportation, storage and distribution services to PEMEX and other companies, including the Federal Electricity Commission, *Aeropuertos y Servicios Auxiliares*, CENAGAS, local gas stations and distributors. This segment assumed operations that were managed by certain deputy directors of the subsidiary entities prior to the recent corporate reorganization, including the Deputy Director of Maintenance and Logistics and the Deputy Director of Distribution of Hydrocarbons of Pemex-Exploration and Production, the Deputy Director of Storage and Allotment of Pemex-Refining and the Deputy Director of Pipelines of Pemex-Gas and Basic Petrochemicals.

During 2015, we transported 64,825 million ton-kilometers of crude oil and petroleum products, an 11.4% decrease as compared to 2014, due to decreased production in our exploration and production segment, decreased processing of crude oil in our refineries and the illicit market in fuels which can lead to temporary pipeline closures. During 2015 we transported 5,142 million cubic feet of natural gas, which was 8% less than our target for the year, primarily due to a decrease in our exploration and production segment's production of wet sour gas. We do not plan to transport natural gas in 2016.

Our logistics segment will continue to provide services to our other segments and to third parties throughout Mexico. It hopes to meet its customers' needs by providing its services in an efficient manner.

### *Cogeneration and Services*

This cogeneration and services segment operates through the productive state-owned subsidiary Pemex Cogeneration and Services, which was created effective June 1, 2015. It intends to use thermal heat and steam from our industrial processes to produce the electricity required by us, as well as to generate surplus electricity to sell to third parties in Mexico. This segment is currently evaluating numerous facilities, both belonging to us and to third parties, to conduct its cogeneration projects.

### *International Trading*

The international trading segment, which operates through P.M.I. Comercio Internacional, S.A. de C.V. (which we refer to as PMI), P.M.I. Trading, Ltd. and their affiliates (which, together with PMI, we collectively refer to as the PMI Group) provides PEMEX with international trading, distribution, risk management, insurance and transportation services. Our PMI Group sells, buys and transports crude oil, refined products and petrochemicals in world markets. Our PMI Group also provides related risk management, insurance, transportation and storage services. We have offices in Mexico City, Houston, Amsterdam, Singapore and Madrid.

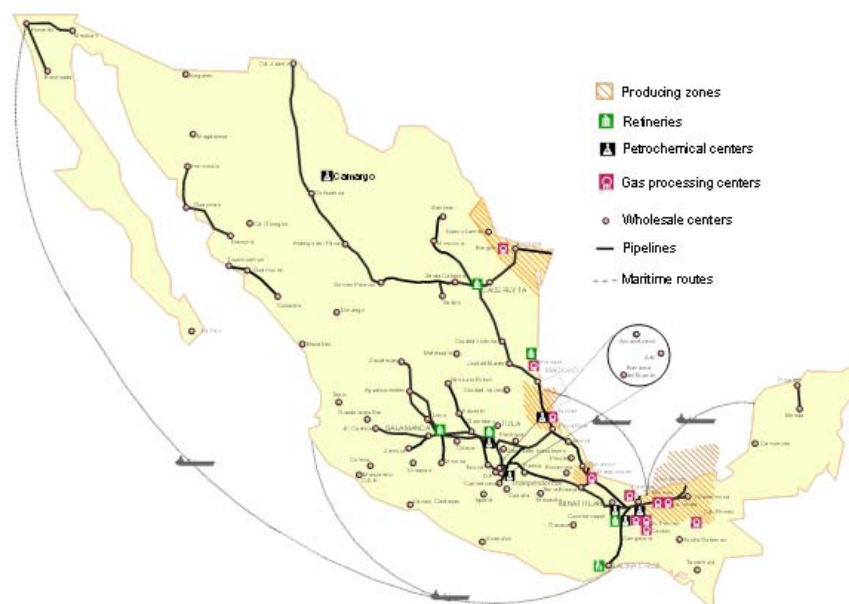
In 2015, our crude oil exports increased in volume by 2.6%, from 1,142.3 thousand barrels per day in 2014 to 1,172.5 thousand barrels per day in 2015. Natural gas imports increased by 4.5% in 2015, from 1,357.8 million cubic feet per day in 2014 to 1,418.4 million cubic feet per day in 2015. In 2015, exports of petrochemical products decreased 29.2%, from 488.0 thousand metric tons in 2014 to 345.8 thousand metric tons in 2015, while imports of petrochemical products increased 1.2%, from 332.7 thousand metric tons in 2014 to 336.1 thousand metric tons in 2015. In 2015, exports of petroleum products decreased 2.8%, from 193.5 thousand barrels per day in 2014 to 198.9 thousand barrels per day in 2015, while imports of petroleum products increased 14.9%, from 548.5 thousand barrels per day in 2014 to 630.1 thousand barrels per day in 2015. As a major supplier of crude oil to the United States, the trading between our international trading segment and the U.S. totaled U.S. \$39.7 billion in 2015, a decrease from U.S. \$65.6 billion in 2014, with U.S. \$18.5 billion in crude oil exports in 2015 as opposed to U.S. \$35.6 billion in 2014.

In addition to being our international trading arm, our trading companies segment is also active in the Mexican market. The PMI Group is party to multiple long-term contracts that we expect will generate business during 2016, including a long-term contract with Petróleos Mexicanos for sulfur sales and a long-term agreement with Mex Gas, one of our affiliates, for naphtha sales. The PMI Group is also a party to negotiations for a number of projects, including negotiations with Petróleos Mexicanos for various long-term contracts; negotiations with the Ministry of Energy and the CNH to become the *Comercializador del Estado* (State Marketer), which will allow it to trade oil, gas and condensates produced within Mexico and negotiations with the winners of the third round of Round One in order to trade oil, gas, and condensates produced by the fields assigned to these third parties.

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In light of our exploration and production segment's current operations, we estimate that 2016 export levels will be similar to those reported for 2015.

### Infrastructure of PEMEX



### Exploration and Production

Due to our recent corporate reorganization, certain business units and assets that were operated by our exploration and production segment were transferred to our drilling and services segment upon the formation of Pemex Drilling and Services on August 1, 2015. For the year ended December 31, 2015, we have not presented separately the operating results of our drilling and services segment in this Item 4 and, accordingly, the results of our exploration and production segment include the results of that segment for this period. Operating results for these segments will be presented separately for periods beginning January 1, 2016. For more information on our corporate restructuring and our new operating segments, see “—History and Development—Corporate Reorganization” above in this Item 4. For a detailed description of the financial results of each segment, see our consolidated financial statements included herein.

#### *Exploration and Drilling*

We seek to identify new oil reservoirs through our exploration program in order to increase the future replacement rate of proved reserves. From 1990 to 2015, we completed 13,037 exploration and development wells.

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During 2015, our average success rate for exploratory wells was 50.0% and our average success rate for development wells was 93.0%. From 2011 to 2015, we discovered 17 new crude oil fields and 18 new natural gas fields, bringing the total number of our crude oil and natural gas producing fields to 394 at the end of 2015.

Our 2015 exploration program was comprised of exploration in both onshore and offshore regions, including the deep waters of the Gulf of Mexico. These exploratory activities yielded 119.8 million barrels of oil equivalent of proved reserves resulting from the discovery of six oil producing fields. We continued our main seismic data acquisition activities, in particular, those related to three-dimensional seismic data. We acquired 485 square kilometers of three-dimensional seismic data in 2015, all of which was in the onshore area of the Southern Basin, and 645 square kilometers of two-dimensional seismic data in oil and gas shale areas. During 2015, we successfully delineated three fields in the Gulf of Mexico, which involved the drilling of three wells to determine the extent of the reserves found at each field. However, proved reserves have not yet been booked for these fields, as the necessary facilities for development are not yet in place.

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The following table summarizes our drilling activity for the five years ended December 31, 2015, all of which occurred in Mexican territory.

	Year ended December 31,				
	2011	2012	2013	2014	2015
Wells initiated <sup>(1)</sup>	1,000	1,290	705	474	274
Exploratory wells initiated <sup>(1)</sup>	32	36	40	20	22
Development wells initiated <sup>(1)</sup>	968	1,254	665	454	252
Wells drilled <sup>(2)</sup>	1,034	1,238	817	535	312
Exploratory wells	33	37	38	24	26
Productive exploratory wells <sup>(3)</sup>	16	21	23	8	13
Dry exploratory wells	17	16	15	16	13
Success rate %	48	57	61	33	50
Development wells	1,001	1,201	779	511	286
Productive development wells	955	1,159	747	484	266
Dry development wells	46	42	32	26	20
Success rate % <sup>(4)</sup>	95	97	96	95	93
Producing wells (annual averages)	8,315	9,439	9,836	9,558	9,363
Marine region	500	537	559	581	544
Southern region	1,136	1,230	1,340	1,420	1,403
Northern region	6,679	7,672	7,937	7,557	7,416
Producing wells (at year end) <sup>(5)</sup>	8,271	9,476	9,379	9,077	8,826
Crude oil	5,193	6,188	6,164	5,598	5,374
Natural gas	3,078	3,288	3,215	3,479	3,452
Producing fields	416	449	454	428	434
Marine region	36	38	42	45	41
Southern region	99	101	102	97	97
Northern region	281	310	310	286	296
Drilling rigs	128	136	139	136	113
Kilometers drilled	2,494	3,007	1,627	1,413	815
Average depth by well (meters)	2,418	2,429	2,710	2,738	3,038
Discovered fields <sup>(6)</sup>	8	9	10	2	6
Crude oil	4	2	5	—	6
Natural gas	4	7	5	2	—
Crude oil and natural gas output by well (barrels of oil equivalent per day)	448	392	371	370	349
Total developed acreage (km <sup>2</sup> ) <sup>(7)</sup>	8,536	8,652	8,706	8,339	8,654
Total undeveloped acreage (km <sup>2</sup> ) <sup>(7)</sup>	987	1,040	977	1,278	1,000

Note: Numbers may not total due to rounding.

(1) "Wells initiated" refers to the number of wells the drilling of which commenced in a given year, regardless of when the well was or will be completed.

(2) "Wells drilled" refers to the number of wells the drilling of which was completed in a given year, regardless of when the drilling of the well commenced.

(3) Excludes non-commercial productive wells.

(4) Excludes injector wells.

(5) All productive wells, and all other wells referred to in this table, are "net," because we do not grant others any fractional working interests in any wells that we own; we also have not acquired any fractional working interest in wells owned by others.

(6) Includes only fields with proved reserves.

(7) All acreage is net because we neither grant others fractional interests nor enter into other types of production sharing arrangements.

Source: Pemex Exploration and Production.

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### *Extensions and Discoveries*

During 2015, exploratory activity in shallow waters led to the incorporation of approximately 120 million barrels of oil equivalent in six fields located close to our existing facilities. We have also increased exploratory work in shallow waters to incorporate proved reserves.

### *Reserves*

Under the Mexican Constitution, all oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by us. As of December 31, 2014, Pemex-Exploration and Production was assigned rights through Round Zero corresponding to areas that together contained 95.2% of Mexico's total proved reserves. Pemex Exploration and Production, as the successor to Pemex-Exploration and Production, has the right to extract, but not own, these reserves, and to sell the resulting production. Of our total proved reserves, 321 million barrels of oil equivalent were temporarily assigned to us for a two-year period. For more information about the proved reserves assigned to us through Round Zero, see "—History and Development—Recent Energy Reform—Assignment of Exploration and Production Rights" above in this Item 4. As of the date of this report, the exploration and development activities of Petróleos Mexicanos and the subsidiary entities are limited to reserves located in Mexico.

Proved oil and natural gas reserves are those estimated quantities of crude oil, natural gas and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be economically producible from a given date forward, from known reservoirs and under existing economic conditions, operating methods and government regulations.

Proved reserves estimates as of December 31, 2015 were prepared by our exploration and production segment and were reviewed by the Independent Engineering Firms (as defined below), which audit its estimates of our hydrocarbon reserves. In addition, pursuant to the *Reglamento de la Ley de Hidrocarburos* (Regulations to the Hydrocarbons Law), the NHC reviewed and approved the proved reserves reports estimates as of December 31, 2015 that we provided on March 31, 2016.

We estimate reserves based on generally accepted petroleum engineering and evaluation methods and procedures, which are based primarily on applicable SEC regulations and, as necessary, the Society of Petroleum Engineers' (which we refer to as the SPE) publication entitled *Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information*, dated February 19, 2007 and other SPE publications, including the SPE's publication entitled *Petroleum Resources Management System*, as well as other technical sources, including *Estimation and Classification of Reserves of Crude Oil, Natural Gas, and Condensate*, by Chapman Cronquist, and *Determination of Oil and Gas Reserves, Petroleum Society Monograph Number 1*, published by the Canadian Institute of Mining and Metallurgy & Petroleum. The choice of method or combination of methods employed in the analysis of each reservoir is determined by:

- experience in the area;
- stage of development;
- quality and completeness of basic data; and
- production and pressure histories.

Reserves data set forth herein represent only estimates. Reserves valuation is a subjective process of estimating underground accumulations of crude oil and natural gas that cannot be measured in an exact manner. The accuracy of any reserves estimate depends on the quality of available data, engineering and geological interpretation and professional judgment. As a result, estimates of different engineers may vary. In addition, the results of drilling, testing and producing subsequent to the date of an estimate may lead to the revision of an estimate.

During 2015, we did not record any material increase in our proved hydrocarbons reserves as a result of the use of new technologies.

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In order to ensure the reliability of our reserves estimation efforts, we have undertaken the internal certification of our estimates of reserves since 1996. We have established certain internal controls in connection with the preparation of our proved reserves estimates. Initially, teams of geoscientists from our exploration and exploitation business units (with each of these units covering several projects) prepare the reserves estimates, using distinct estimation processes for valuations relating to new discoveries and developed fields, respectively. Subsequently, the regional reserves offices collect these reserves estimates from the units and request that the *Gerencia de Recursos y de Certificación de Reservas* (Office of Resources and Certification of Reserves), the central hydrocarbon reserves management body of Pemex Exploration and Production, review and certify such valuations and the booking of the related reserves. This internal certification process is undertaken in accordance with internal guidelines for estimating and classifying proved reserves, which are based on the SEC's rules and definitions. The Office of Resources and Certification of Reserves, which additionally oversees and conducts an internal audit of the process described above, consists entirely of professionals with geological, geophysical, petrophysical and reservoir engineering backgrounds. The engineers who participate in our reserves estimation process are experienced in: reservoir numerical simulation; well drilling and completion; pressure, volume and temperature (PVT) analysis; NODAL™ (an analytical tool used in forecasting the performance of the various elements comprising the production system) analysis; and design strategies in petroleum field development. Furthermore, all of our personnel have been certified by the *Secretaría de Educación Pública* (Ministry of Public Education), most have earned master's degrees in areas of study such as petroleum engineering, geology and geophysical engineering and they possess an average of over fifteen years of professional experience.

In addition to this internal review process, our exploration and production segment's final reserves estimates are audited by independent engineering firms. Three independent engineering firms audited our estimates of proved reserves as of December 31, 2015: Netherland Sewell; DeGolyer and MacNaughton; and Ryder Scott (we refer to these firms together as the Independent Engineering Firms). The reserves estimates reviewed by the Independent Engineering Firms totaled 88.0% of our estimated proved reserves. The remaining 12.0% of our estimated proved reserves consisted of reserves located in certain areas in which third parties provide us with drilling services. Under such agreements, the corresponding third party is responsible for assessing the volume of reserves. Netherland Sewell audited the reserves in the Poza Rica-Altamira and the Litoral de Tabasco business units. DeGolyer and MacNaughton audited reserves in the Burgos and Veracruz business units and Ryder Scott audited the reserves in the Bellota-Jujo, Cinco Presidentes, Macuspana-Muspac, Samaria-Luna, Abkatún-Pol-Chuc, Cantarell and Ku-Maloob-Zaap business units. The audits conducted by the Independent Engineering Firms consisted primarily of: (1) analysis of historical static and dynamic reservoir data that we have provided; (2) construction or updating of the Independent Engineering Firms' own static and dynamic reservoir characterization models of Mexican oil fields; (3) economic analysis of selected fields; and (4) review of our production forecasts and reserves estimates.

Since reserves estimates are, by definition, only estimates, they cannot be reviewed for the purpose of verifying exactness. Instead, the Independent Engineering Firms conducted a detailed review of our reserves estimates so that they could express an opinion as to whether, in the aggregate, the reserves estimates we furnished were reasonable and had been estimated and presented in conformity with generally accepted petroleum engineering and evaluation methods and procedures.

All questions, including any suggested modifications to proved reserves estimates, that arose during the Independent Engineering Firms' review process were resolved by our exploration and production segment to the satisfaction of the Independent Engineering Firms. The Independent Engineering Firms have concluded that our estimated total proved oil and natural gas reserve volumes set forth in this report are, in the aggregate, reasonable and have been prepared in accordance with Rule 4-10(a) of Regulation S-X of the SEC, as amended (which we refer to as Rule 4-10(a)), are consistent with international reserves reporting practice and are in accordance with the revised oil and gas reserves disclosure provisions of ASC Topic 932.

Our total proved developed and undeveloped reserves of crude oil, condensates and liquefiable hydrocarbons recoverable from field processing plants decreased by 22.5% in 2015, from 10,292 million barrels at December 31, 2014 to 7,977 million barrels at December 31, 2015. Our proved developed reserves of crude oil, condensates and liquefiable hydrocarbons recoverable from processing plants decreased by 19.8% in 2015, from 7,141 million barrels at December 31, 2014 to 5,724 million barrels at December 31, 2015. These decreases were principally due to oil production in 2015, lower prices of hydrocarbons, a decrease in field development activities and field behavior.

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The amount of crude oil, condensate and liquefiable hydrocarbon reserves added in 2015 was insufficient to offset the level of production in 2015, which amounted to 935 million barrels of crude oil, condensates and liquefiable hydrocarbons.

Our total proved developed and undeveloped dry gas reserves decreased by 20.7% in 2015, from 10,859 billion cubic feet at December 31, 2014 to 8,610 billion cubic feet at December 31, 2015. Our proved developed dry gas reserves decreased by 10.8% in 2015, from 6,740 billion cubic feet at December 31, 2014 to 6,012 billion cubic feet at December 31, 2015. These decreases were principally due to oil production in 2015, lower prices of hydrocarbons, a decrease in field development activities and field behavior. The amount of dry gas reserves added in 2015 was insufficient to offset the level of production in 2015, which amounted to 1,341 billion cubic feet of dry gas. Our proved undeveloped dry gas reserves decreased by 36.9% in 2015, from 4,119 billion cubic feet at December 31, 2014 to 2,598 billion cubic feet at December 31, 2015.

During 2015, there were no reclassifications from proved undeveloped, probable and possible reserves to proved developed reserves.

During 2015, exploratory activity in shallow waters incorporated approximately 120 million barrels of oil equivalent in six new fields located close to our existing facilities. We also increased exploratory work in shallow waters in order to incorporate proved reserves that support future new production in the short term.



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The following three tables of crude oil and dry gas reserves set forth our estimates of our proved reserves determined in accordance with Rule 4-10(a).

**Summary of Oil and Gas<sup>(1)</sup> Proved Reserves as of December 31, 2015**  
**Based on Average Fiscal Year Prices**

	<u>Crude Oil and Condensates<sup>(2)</sup></u> <u>(in millions of barrels)</u>	<u>Dry Gas<sup>(3)</sup></u> <u>(in billions of cubic feet)</u>
<b>Proved developed and undeveloped reserves</b>		
Proved developed reserves	5,725	6,012
Proved undeveloped reserves	<u>2,252</u>	<u>2,598</u>
<b>Total proved reserves</b>	<u><u>7,977</u></u>	<u><u>8,610</u></u>

Note: Numbers may not total due to rounding.

(1) We do not currently produce synthetic oil or synthetic gas, or other natural resources from which synthetic oil or synthetic gas can be produced.

(2) Crude oil and condensate reserves include the fraction of liquefiable hydrocarbons recoverable in natural gas processing plants located at fields.

(3) Reserve volumes reported in this table are volumes of dry gas, although natural gas production reported in other tables refers to sour wet gas. There is a shrinkage in volume when natural gas liquids and impurities are extracted to obtain dry gas. Therefore, reported natural gas volumes are greater than dry gas volumes.

Source: Pemex Exploration and Production.

**Crude Oil and Condensate Reserves**  
**(including natural gas liquids)<sup>(1)</sup>**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
<b>Proved developed and undeveloped reserves</b>					
At January 1	11,394	11,362	11,424	11,079	10,292
Revisions <sup>(2)</sup>	824	1,012	630	95	(1,491)
Extensions and discoveries	194	103	62	119	111
Production	<u>(1,050)</u>	<u>(1,053)</u>	<u>(1,037)</u>	<u>(1,001)</u>	<u>(935)</u>
At December 31	<u>11,362</u>	<u>11,424</u>	<u>11,079</u>	<u>10,292</u>	<u>7,977</u>
<b>Proved developed reserves at December 31</b>	7,618	7,790	7,360	7,141	5,725
<b>Proved undeveloped reserves at December 31</b>	3,744	3,634	3,719	3,151	2,252

Note: Numbers may not total due to rounding.

(1) Crude oil and condensate reserves include the fraction of liquefiable hydrocarbons recoverable in natural gas processing plants located at fields.

(2) Revisions include positive and negative changes due to new data from well drilling, revisions made when actual reservoir performance differs from expected performance and the effect of changes in hydrocarbon prices.

Source: Pemex Exploration and Production.

**Dry Gas Reserves**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
<b>Proved developed and undeveloped reserves</b>					
At January 1	12,494	12,734	12,713	12,273	10,859
Revisions <sup>(1)</sup>	1,592	1,377	1,010	4	(955)
Extensions and discoveries	249	162	89	93	47
Production <sup>(2)</sup>	<u>(1,601)</u>	<u>(1,560)</u>	<u>(1,539)</u>	<u>(1,511)</u>	<u>(1,341)</u>
At December 31	<u>12,734</u>	<u>12,713</u>	<u>12,273</u>	<u>10,859</u>	<u>8,610</u>
<b>Proved developed reserves at December 31</b>	7,958	7,951	7,461	6,740	6,012
<b>Proved undeveloped reserves at December 31</b>	4,776	4,762	4,811	4,119	2,598

Note: Numbers may not total due to rounding.

(1) Revisions include positive and negative changes due to new data from well drilling, revisions made when actual reservoir performance differs from expected performance and the effect of changes in hydrocarbon prices.

(2) Production refers here to dry gas, although natural gas production reported in other tables refers to sour wet gas. There is a shrinkage in volume when natural gas liquids and impurities are extracted to obtain dry gas. Therefore, reported natural gas volumes are greater than dry gas volumes.

Source: Pemex Exploration and Production.

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The following table sets forth, as of December 31, 2015, the volumes of proved developed and undeveloped reserves, the number of producing wells and the number of proved undeveloped locations for the fields that contained 95.1% of our proved reserves.

Field	Reserves			Number of Producing Wells	Number of Undeveloped Locations <sup>(2)</sup>
	Proved <sup>(1)</sup>	Developed <sup>(1)</sup>	Undeveloped <sup>(1)</sup>		
	(in millions of barrels of oil equivalent)				
Ku-Maloob-Zaap	2,871.2	2,499.1	372.0	177	36
Akal	768.4	768.4	0.0	109	0
Aceite Terciario del Golfo <sup>(3)</sup>	656.8	133.8	522.9	2,346	5,602
C. Antonio J. Bermúdez <sup>(4)</sup>	603.5	410.5	193.0	262	73
Jujo-Tecominoacán	388.8	264.5	124.4	39	20
Ayatsil	315.3	41.9	273.3	2	8
Tsimín	274.0	248.2	25.8	16	2
Xux	211.7	190.4	21.3	10	3
Xanab	163.3	94.2	69.2	7	12
Onel	147.2	108.5	38.7	6	7
Kuil	118.8	36.1	82.6	7	10
Ixtal	112.6	86.4	26.2	12	8
Santuario	109.6	35.2	74.4	36	32
Homol	104.9	68.2	36.8	9	7
Ek	102.0	102.0	0.0	14	0
Balam	96.2	96.2	0.0	9	0
Lakach	93.8	0.0	93.8	0	0
Sihil	62.7	62.7	0.0	23	0
Tekel	60.3	0.0	60.3	0	5
Tamaulipas Constituciones	59.3	25.2	34.1	280	265
Costero	57.2	52.4	4.8	14	1
Xikin	56.0	0.0	56.0	0	4
Terra	54.3	25.4	29.0	9	6
Kab	52.2	15.7	36.5	4	6
Cárdenas	51.9	41.7	10.2	10	4
Yaxché	51.2	15.4	35.8	8	7
Eltreinta	49.6	15.1	34.5	7	22
Chuc	49.0	45.9	3.1	12	1
Tizón	48.9	42.3	6.6	11	1
Arenque	48.0	13.7	34.2	14	10
Puerto Ceiba	47.6	31.6	15.9	14	8
Kambesah	47.2	47.2	0.0	5	0
May	44.1	44.1	0.0	12	0
Sen	43.5	21.1	22.4	12	3
Bellota	43.4	26.2	17.3	5	5
Giraldas	43.3	34.5	8.8	9	1
Kax	41.7	41.7	0.0	2	0
Ogarrio	41.7	41.7	0.0	121	0
Ebano-Pánuco-Cacalilao	40.1	24.3	15.8	402	317
Mora	40.0	31.2	8.8	7	4
Ayín	38.8	0.0	38.8	0	4
Cuervito	37.5	17.2	20.3	92	59
Edén-Jolote	33.3	17.2	16.1	8	6
Chuhuk	33.3	28.7	4.6	4	1
Gasífero	33.1	26.7	6.4	25	10
Sinán	31.7	31.7	0.0	12	0

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Field	Reserves			Number of Producing Wells	Number of Undeveloped Locations <sup>(2)</sup>
	Proved <sup>(1)</sup>	Developed <sup>(1)</sup>	Undeveloped <sup>(1)</sup>		
Madrefil	31.0	25.8	5.3	5	1
Rabasa	29.8	28.1	1.7	40	4
Utsil	27.5	0.0	27.5	0	3
Poza Rica	26.7	24.0	2.7	179	15
Cauchy	26.6	26.6	0.0	28	0
Ixtoc	26.2	26.2	0.0	10	0
Lum	24.8	18.5	6.3	2	3
Cuitláhuac	24.8	13.5	11.3	197	53
Abkatún	22.2	22.2	0.0	11	0
Chinchorro	21.7	14.1	7.6	5	3
Tupilco	21.5	20.6	1.0	28	2
Caparoso-Pijije-Escuintle	21.4	17.6	3.8	12	1
Tetl	20.3	0.0	20.3	0	4
Teotleco	19.3	11.5	7.8	9	2
Nejo	19.1	18.0	1.1	294	9
Yagual	17.8	14.6	3.2	4	1
San Ramón	17.6	17.5	0.1	59	3
Nohoch	17.0	17.0	0.0	7	0
Etkal	17.0	3.2	13.9	0	3
Guaricho	17.0	16.1	0.9	14	2
Bolontikú	16.8	16.8	0.0	6	0
Sini	16.7	12.5	4.2	6	2
Sunuapa	16.7	14.4	2.3	11	2
Jaatsul	16.5	0.0	16.5	0	2
Bacab	16.5	16.5	0.0	6	0
Taratunich	15.9	15.9	0.0	5	0
Ayocote	15.7	12.6	3.0	11	2
Caan	15.6	15.6	0.0	8	0
Chiapas-Copanó	15.3	15.3	0.0	11	0
Uech	15.1	15.1	0.0	2	0
Los Soldados	15.1	12.4	2.7	35	4
Bricol	14.6	10.2	4.4	7	1
Magallanes-Tucán-Pajonal	14.1	11.9	2.2	54	5
Tintal	14.0	7.5	6.5	7	10
Arcabuz-Culebra	12.9	9.7	3.2	595	40
<b>Total</b>	<b>9,159.9</b>	<b>6,525.7</b>	<b>2,634.2</b>	<b>5,851</b>	<b>6,747</b>
<b>Our proved reserves</b>	9,632.0	6,880.3	2,751.7		
<b>Percentage</b>	95.1%	94.8%	95.7%		

Note: Numbers may not total due to rounding.

(1) Proved reserves, developed reserves and undeveloped reserves are expressed in millions of barrels of oil equivalent. To convert dry gas to barrels of oil equivalent, a factor of 5.201 thousand cubic feet of dry gas per barrel of oil equivalent is used.

(2) Undeveloped Locations refers to the number of geographic sites or locations where a well will be drilled to produce undeveloped proved reserves.

(3) Includes extraction assignments and temporary assignments.

(4) Includes the Cunduacán, Iride, Oxiacaque, Platanal and Samaria fields.

Source: Pemex Exploration and Production.

Our reserve-replacement ratio, or RRR, for a given period is calculated by dividing the sum of proved reserves additions due to discoveries, developments, delineations and revisions by that period's total production. During 2015, we obtained 120 million barrels of oil equivalent of proved reserves from discoveries. However, this volume was not enough to compensate for the reductions in reserves resulting from revisions, delimitations and decreased development and production in 2015. As a result, there was no replacement of proved reserves in 2015. The fact that in 2014 RRR was 18% and that there was no replacement of reserves in 2015 represents a decline in proved reserves during both of these periods.

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Our reserves production ratio, which is presented in terms of years, is calculated by dividing the estimated remaining reserves at the end of the relevant year by the total production of hydrocarbons for that year. As of December 31, 2015, this ratio was equal to 8.1 years for proved reserves of crude oil equivalent, which represents a decrease of 15.6% as compared to the 2014 reserves production ratio of 9.6 years for proved reserves. For more information, see Note 28 to our consolidated financial statements included herein.

#### *Sales Prices and Production Costs*

The following table sets forth our average sales price per unit of oil and gas produced and our average production cost per unit of production, in the aggregate and for each field containing 8.0% or more of our proved reserves.

**Unit Sales Prices and Production Costs<sup>(1)</sup>**

	<u>Ku-Maloob- Zaap</u>	<u>Akal</u>	<u>Other Fields</u> (in U.S. dollars)	<u>All Fields</u>
<b>Year ended December 31, 2015</b>				
Average sales prices				
Crude oil, per barrel	U.S. \$ 41.21	U.S. \$47.79	U.S. \$ 51.51	U.S. \$48.22
Natural gas, per thousand cubic feet	U.S. \$ 4.59	U.S. \$ 3.59	U.S. \$ 3.79	U.S. \$ 3.78
Average production costs, per barrel of oil equivalent	U.S. \$ 6.93	U.S. \$15.97	U.S. \$ 9.69	U.S. \$ 9.40
<b>Year ended December 31, 2014</b>				
Average sales prices				
Crude oil, per barrel	U.S. \$ 80.58	U.S. \$90.67	U.S. \$ 95.14	U.S. \$90.37
Natural gas, per thousand cubic feet	U.S. \$ 6.96	U.S. \$ 5.36	U.S. \$ 5.74	U.S. \$ 5.71
Average production costs, per barrel of oil equivalent	U.S. \$ 5.05	U.S. \$10.79	U.S. \$ 9.16	U.S. \$ 8.22
<b>Year ended December 31, 2013</b>				
Average sales prices				
Crude oil, per barrel	U.S. \$ 92.50	U.S. \$98.72	U.S. \$104.62	U.S. \$99.92
Natural gas, per thousand cubic feet	U.S. \$ 5.03	U.S. \$ 4.95	U.S. \$ 5.00	U.S. \$ 4.93
Average production costs, per barrel of oil equivalent	U.S. \$ 4.88	U.S. \$11.01	U.S. \$ 10.79	U.S. \$ 7.91

(1) Average of sales prices as of the last day of each month of the year.

Source: Pemex Exploration and Production.

In 2015, our average production cost was U.S. \$9.40 per barrel of oil equivalent, and represented an increase of 14.4%, as compared to our average production cost of U.S. \$8.22 per barrel in 2014. This increase resulted primarily from new non-income related taxes and duties approved under the new fiscal regime applicable to us in 2015.

We calculate and disclose our production costs pursuant to international practices, which are based on U.S. GAAP under ASC Topic 932. In accordance with ASC Topic 932, the production cost per barrel of oil equivalent is calculated by dividing total production expenses (in U.S. dollars) by total production of hydrocarbons (in barrels of oil equivalent) for the relevant period.

Our total production cost consists of all direct and indirect costs incurred to produce crude oil and gas, including costs associated with the operation and maintenance of wells and related equipment and facilities. In addition, it includes costs of labor to operate the wells and facilities, the costs of materials, supplies and fuel consumed, including gas used for gas lifting, nitrogen and other chemicals, repair and non-capitalized maintenance costs, and other costs, such as fees for general services, a labor fund for active personnel, corporate services, indirect overhead and applicable taxes and duties. However, it excludes non-cash expenses such as amortization of capitalized well expenses, the depreciation of fixed assets, expenses associated with the distribution and handling of hydrocarbons and other expenses that are related to exploration and drilling activities.

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### *Crude Oil and Natural Gas Production*

In 2015, we produced an average of 2,266.8 thousand barrels per day of crude oil, 6.7% less than our average production in 2014 of 2,428.8 thousand barrels per day of crude oil. The decrease in 2015 resulted primarily from the decrease of production in the Cantarell, Crudo Ligero Marino, Ixtal-Manik, Cactus Sitio Grande, El Golpe-Puerto Ceiba, Complejo Antonio J. Bermúdez, Costero Terrestre, Ek Balam and Ku-Maloob-Zaap projects. Accordingly, our average production of heavy crude oil decreased by 113.2 thousand barrels per day, or 8.9% less than the average daily production in 2014, primarily due to the natural decline in field production, an increase in water production and an increase in the gas production cap of reservoirs, particularly for reservoirs past the saturation stage. Extraction costs and operations have also reduced the profitability of certain well interventions, which has hindered our ability to maintain and develop them. This was partially offset by the development of the Yaxché and Tsimin-Xux projects, as well as our diversification of artificial systems of production in offshore fields. In 2015, the average production of light crude oil decreased by 48.8 thousand barrels per day, or 4.2%, as compared to 2014, mainly due to platform closings, an explosion that occurred at the Abkatún-A Permanente platform, a decline in the Tsimin field and increased water production in the Xux field.

Crude oil can be classified by its sulfur content. “Sour” or heavy crude oil contains 3.4% or greater sulfur content by weight and “sweet” or light crude oil contains less than 1.0% sulfur content by weight. Most of our production is classified as sour or heavy crude oil.

Our exploration and production segment primarily produces four types of crude oil:

- Altamira, a heavy crude oil;
- Maya, a heavy crude oil;
- Isthmus, a light crude oil; and
- Olmeca, an extra-light crude oil.

Most of our production consists of Isthmus and Maya crude oil. In 2015, 50.8% of our total production of crude oil consisted of heavy crude oil and 49.2% consisted of light and extra-light crude oil. The Marine regions yield mostly heavy crude oil (59.9% of these regions' production in 2015), although significant volumes of light crude oil are also produced there (40.1% of these regions' production in 2015). The Southern region yields mainly light and extra-light crude oil (together, 91.9% of this region's production in 2015), and the Northern region yields both light and extra-light crude oil (41.7% of this region's production in 2015) and heavy crude oil (58.3% of this region's production in 2015). Beginning in 2014, we began producing Talam, which rather than being directly extracted is a blend of crude oil at approximately 16 API.

The most productive crude oil and natural gas fields in the Gulf of Mexico are located in the Ku-Maloob-Zaap, Litoral de Tabasco, Abkatún-Pol-Chuc and Cantarell business units in the Marine regions and the Sarmaria Luna and Bellota-Jujo business units in the Southern region. In particular, the Ku-Maloob-Zaap business unit was the most important crude oil producer in 2015, producing an average of 853.1 thousand barrels of crude oil per day in 2015, or 37.6% of our total crude oil production for the year, and 556.5 million cubic feet per day of natural gas, or 8.7% of our total natural gas production for the year. Our second most important crude oil producer was Litoral de Tabasco which produced an average of 347.2 thousand barrels of crude oil per day in 2015, or 15.3% of our total crude oil production for the year, and an average of 993.5 million cubic feet per day of natural gas, or 15.5% of our total natural gas production for the year.

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The following table sets forth our annual crude oil production rates by type of oil for the five years ended December 31, 2015.

**Crude Oil Production**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2015</u> <u>vs. 2014</u>
	<u>(in thousands of barrels per day)</u>					<u>(%)</u>
<b>Marine regions</b>						
Heavy crude oil	1,322.8	1,280.2	1,258.3	1,160.1	1,054.9	(9.1)
Light crude oil <sup>(1)</sup>	<u>580.5</u>	<u>614.5</u>	<u>638.1</u>	<u>691.3</u>	<u>705.4</u>	2.0
Total	1,903.3	1,894.6	1,896.4	1,851.4	1,760.3	(4.9)
<b>Southern region</b>						
Heavy crude oil	16.7	18.5	26.5	35.0	31.7	(9.3)
Light crude oil <sup>(1)</sup>	<u>513.9</u>	<u>489.6</u>	<u>454.3</u>	<u>417.4</u>	<u>362.1</u>	(13.3)
Total	530.6	508.2	480.8	452.4	393.8	(13.0)
<b>Northern region</b>						
Heavy crude oil	77.6	86.3	80.2	70.4	65.7	(6.6)
Light crude oil <sup>(1)</sup>	<u>41.2</u>	<u>58.8</u>	<u>64.7</u>	<u>54.6</u>	<u>47.0</u>	(13.9)
Total	118.8	145.1	144.9	125.0	112.7	(9.8)
Total heavy crude oil	1,417.1	1,385.0	1,365.1	1,265.5	1,152.3	(8.9)
Total light crude oil <sup>(1)</sup>	<u>1,135.5</u>	<u>1,162.9</u>	<u>1,157.1</u>	<u>1,163.3</u>	<u>1,114.5</u>	(4.2)
Total crude oil	<u>2,552.6</u>	<u>2,547.9</u>	<u>2,522.1</u>	<u>2,428.8</u>	<u>2,266.8</u>	(6.7)

Note: Numbers may not total due to rounding.

(1) Includes extra-light crude oil.

Source: Pemex Exploration and Production.

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The following table sets forth our annual crude oil production by region and business unit for the five years ended December 31, 2015.

### Crude Oil Production

	2011	2012	2013	2014	2015	2015 vs. 2014 (%)
	(in thousands of barrels per day)					
<b>Marine regions</b>						
Ku-Maloob-Zaap	842.1	855.1	863.8	856.7	853.1	(0.4)
Cantarell	500.7	454.1	439.8	374.9	273.4	(27.1)
Litoral de Tabasco	284.4	319.2	299.2	320.4	347.2	8.4
Abkatún-Pol-Chuc	276.2	266.3	293.6	299.3	286.7	(4.2)
Total	1,903.3	1,894.6	1,896.4	1,851.4	1,760.3	(4.9)
<b>Southern region</b>						
Samaria-Luna	222.7	205.1	172.5	161.4	145.4	(9.9)
Bellota-Jujo	143.4	130.3	134.3	124.8	101.7	(18.5)
Cinco Presidentes	83.5	96.0	93.1	89.1	87.6	(1.7)
Macuspana-Muspac <sup>(1)</sup>	81.1	76.8	80.9	77.0	59.0	(23.4)
Total	530.6	508.2	480.8	452.4	393.8	(13.0)
<b>Northern region</b>						
Aceite Terciario del Golfo	52.8	68.6	66.2	48.8	42.0	(13.9)
Poza Rica-Altamira	60.2	67.8	61.5	59.8	58.7	(1.9)
Burgos	2.5	4.8	8.0	5.0	0.0	0.0
Veracruz	3.2	4.0	9.3	11.4	12.1	6.1
Total	118.8	145.1	144.9	125.0	112.7	(9.8)
Total crude oil	2,552.6	2,547.9	2,522.1	2,428.8	2,266.8	(6.7)

Note: Numbers may not total due to rounding.

(1) As of 2012, the Macuspana and Muspac business units were merged into the Macuspana-Muspac business unit.

Source: Pemex Exploration and Production.

The Marine regions, which are comprised of the Northeastern Marine region and the Southwestern Marine region, are located on the continental shelf and its slope in the Gulf of Mexico. They cover a surface area of approximately 550,000 square kilometers, located entirely within Mexican territorial waters, along the coast of the states of Tabasco, Campeche, Yucatán, Quintana Roo and the southern coast of the state of Veracruz. In 2015, the average crude oil production from the 41 fields located in these regions was 1,760.3 thousand barrels per day.

The Southern region covers an area of approximately 392,000 square kilometers, including the states of Guerrero, Oaxaca, Chiapas, Tabasco, Yucatán, Quintana Roo, Campeche and Veracruz. In 2015, the average crude oil production from the 97 fields located in this region was 393.8 thousand barrels per day.

The Northern region, including its offshore area, is located on the continental shelf in the Gulf of Mexico along the coast of the state of Tamaulipas and the northern coast of the state of Veracruz. It covers an area of approximately 1.8 million square kilometers. Our production area in the onshore portion of this region is located in, among others, the states of Veracruz, Tamaulipas, Nuevo León, Coahuila, San Luis Potosí and Puebla; we also produce offshore on the continental shelf in the Gulf of Mexico. In 2015, the average crude oil and natural gas production in the Northern region totaled 112.7 thousand barrels of crude oil per day and 1,737.9 million cubic feet of natural gas per day, respectively, from the 296 oil and gas fields in this region.

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The following table sets forth our annual natural gas production by region and business unit for the five years ended December 31, 2015.

### Natural Gas Production

	2011	2012	2013	2014	2015	2015 vs. 2014 (%)
	(in millions of cubic feet per day)					
<b>Marine regions</b>						
Cantarell	1,074.7	1,004.2	1,007.1	1,120.9	1,277.1	13.9
Litoral de Tabasco	649.3	735.6	747.6	842.6	993.5	17.9
Abkatún-Pol-Chuc	559.0	523.6	579.4	553.4	455.9	(17.6)
Ku-Maloob-Zaap	330.9	329.7	405.1	571.0	556.5	(2.5)
Total	2,613.9	2,593.1	2,739.2	3,087.9	3,283.0	6.3
<b>Southern region</b>						
Samaria-Luna	715.7	695.9	606.3	583.1	500.3	(14.2)
Macuspana-Muspac <sup>(1)</sup>	571.5	542.9	515.1	490.5	455.3	(7.2)
Bellota-Jujo	288.2	297.4	319.7	288.9	264.5	(8.4)
Cinco Presidentes	116.9	116.3	129.4	152.8	160.1	4.7
Total	1,692.3	1,652.4	1,570.5	1,515.4	1,380.1	(8.9)
<b>Northern region</b>						
Burgos <sup>(2)</sup>	1,344.1	1,269.3	1,286.6	1,221.0	1,099.0	(10.0)
Veracruz	716.7	601.2	494.5	455.3	392.2	(13.9)
Aceite Terciario del Golfo	111.9	148.8	167.0	149.5	145.2	(2.9)
Poza Rica-Altamira	115.2	120.0	112.4	102.8	101.5	(1.3)
Total	2,287.8	2,139.3	2,060.6	1,928.6	1,737.9	(9.9)
Total natural gas	6,594.1	6,384.9	6,370.3	6,531.9	6,401.0	(2.0)

Note: Numbers may not total due to rounding.

(1) As of 2012, the Macuspana and Muspac business units were merged into the Macuspana-Muspac business unit.

(2) As of February 2010, the Burgos business unit includes the hydrocarbons production from the Nejo field.

Source: Pemex Exploration and Production.

In 2015, the Marine regions produced 3,283.0 million cubic feet per day of natural gas, or 51.3% of our total natural gas production, an increase of 6.3% as compared to the regions' 2014 production of 3,087.9 million cubic feet per day. In 2015, the Southern region produced 1,380.1 million cubic feet per day of natural gas, or 21.6% of our total natural gas production, a decrease of 8.9% as compared to the region's 2014 production of 1,515.4 million cubic feet per day. In 2015, the Northern region produced 1,737.9 million cubic feet per day of natural gas, or 27.2% of our total natural gas production, a decrease of 9.9% as compared to the region's 2014 production of 1,928.6 million cubic feet per day.

Our average natural gas production decreased by 2.0% in 2015, from 6,531.9 million cubic feet per day in 2014 to 6,401.0 million cubic feet per day in 2015. Natural gas production associated with crude oil production accounted for 75.4% of total natural gas production in 2015, with the remainder of natural gas production consisting of extraction from fields holding natural gas reserves. As of December 31, 2015, 181 of our 434 gas producing fields, or 41.7%, produced non-associated gas. These non-associated gas fields accounted for 24.6% of all natural gas production in 2015.

### Investments in Exploration and Production

As with our operating results, we present the investments of our exploration and production segment together with the investments of our drilling and services segment. In nominal peso terms, our capital expenditures for exploration and production were Ps. 151,546 million in 2015, as compared to Ps. 222,069 million in 2014, representing a decrease of 31.8% in nominal terms. Of our total capital expenditures, Ps. 23,507 million was directed to the Ku-Maloob-Zaap fields, Ps. 13,950 million was directed to the Tsimin-Xux project, Ps. 2,817 million was directed to the ATG project, Ps. 11,217 million was directed to the Cantarell fields, Ps. 9,275 million was directed to the Crudo Ligero Marino project, Ps. 5,855 million was used for development of the Burgos natural gas fields (including Ps. 2,001 million of investments made through the Financed Public Works Contracts Program, see "—Business Overview—Exploration and Production—Integrated Exploration and Production Contracts and Financed Public Works Contracts" in this Item 4), Ps. 10,037 million was directed to the Chuc project, Ps. 5,352 million was directed to the Antonio J. Bermúdez fields, Ps. 4,626 million was directed to the Ogarrio-Sánchez Magallanes project and Ps. 4,687 million was directed to the Delta del Grijalva fields.



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During 2015, expenditures for these ten projects amounted to 44.7% of all our capital expenditures for exploration and production. The remaining 55.3% amounted to Ps. 83,730 million in nominal terms, which was directed to the 16 remaining projects, as well as to other exploratory projects, other development projects and administrative and technical support.

### *2016 Exploration and Production Capital Expenditures Budget*

For 2016, our total capital expenditures budget is Ps. 121,576 million, as compared to Ps. 151,546 million of capital expenditures made in 2015, representing a decrease of 19.6%. The 2016 budget includes all of the 26 ongoing strategic exploration and production projects, Ps. 19,001 million in other exploratory projects and Ps. 742 million in administrative and technical support. Approximately Ps. 102,559 million, or 84.3% of our 2016 capital expenditures budget, is to be allocated to projects relating to field development and pipelines. Approximately Ps. 19,016 million, or 15.6% of the total budget, will be allocated to exploration activities.

The 2016 exploration and production budget includes Ps. 20,316 million for investments in the Ku-Maloob-Zaap project, Ps. 11,903 million for the Cantarell project, Ps. 9,333 million for the Tsimin-Xux project, Ps. 8,231 million for the Chuc project, Ps. 7,081 million for the Crudo Ligero Marino project, Ps. 3,357 million for the Antonio J. Bermúdez project, Ps. 3,294 million for the Burgos project, Ps. 8,033 million for the Integral Yaxché project, Ps. 3,088 million for the Delta del Grijalva project, Ps. 2,728 million for the Bellota Chinchorro project, Ps. 3,691 million for the Ogarrio-Sánchez Magallanes project and Ps. 60,837 million for the remaining projects, as well as for other exploratory and development projects and administrative and technical support.

### *Exploration and Production Investment Trends*

In 2015, we invested Ps. 31,737 million in nominal terms, or 20.9% of the total capital expenditures of our exploration and production segment, in exploration activities, which represents a 9.5% decrease from the Ps. 35,082 million invested in exploration activities in 2014. In 2015, we invested Ps. 119,808 million in nominal terms, or 79.1% of our total capital expenditures in development activities, which represents a 35.9% decrease from the Ps. 186,986 million invested in development activities in 2014.

In 2016, we have budgeted Ps. 19,016 million, or 16% of total capital expenditures, for exploration activities of our exploration and production segment, which represents a 40.1% decrease in nominal terms from the amount invested in exploration activities in 2015. For development activities in 2016, we have budgeted Ps. 102,559 million, or 84.4% of total capital expenditures, which represents a 15.6% decrease in nominal terms from the amount that we invested in development activities in 2015.

Our projected exploration and development capital expenditures correspond to the areas assigned to us through Round Zero, which represent the areas in which we are exploring, operating or have an interest in developing based on our operational capabilities. The Ministry of Energy granted us the right to explore and develop these areas with the aim of maintaining our production levels in the short term, while providing us with sufficient exploration opportunities to increase our production in the future. Given that a significant number of exploration areas were reserved by the Mexican Government for future competitive bidding rounds, we intend to carry out our strategy of increasing production and improving our RRR over time by entering into strategic joint ventures with other oil and gas companies. Through these joint ventures, we hope to gain access to new technology and international best practices, while sharing the costs associated with security, occupational health and environmental protection and minimizing our operational risks. Over time, the allocation of our capital expenditures budget may change according to the results of subsequent bidding rounds in which we participate.

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The capital expenditures of our exploration and production segment have constituted 83.9% or more of our total capital expenditures in each of the last five years. In 2016, the budgeted capital expenditures of our exploration and production segment constitute 77.6% of our total.

The following table sets forth our capital expenditures related to exploration and development during the five years ended December 31, 2015.

#### Exploration and Development Capital Expenditures for 2011-2015

	Year ended December 31, <sup>(1)</sup>				
	2011	2012	2013	2014	2015
	(in millions of nominal pesos)				
Exploration	Ps. 31,133	Ps. 33,161	Ps. 32,179	Ps. 35,082	Ps. 31,737
Development	145,926	160,640	180,377	186,986	119,808
<b>Total</b>	<b>Ps. 177,059</b>	<b>Ps. 193,801</b>	<b>Ps. 212,556</b>	<b>Ps. 222,069</b>	<b>Ps. 151,546</b>

Note: Numbers may not total due to rounding.

(1) Amounts based on cash basis method of accounting.

Source: Pemex Exploration and Production.

The following table sets forth our estimated capital expenditures budget for exploration and development for 2016.

#### Estimated Exploration and Development Capital Expenditures for 2016

	Year ended December 31, <sup>(1)</sup>	
	2016 <sup>(2)</sup>	
	(in millions of constant 2015 pesos)	
Exploration <sup>(3)</sup>	Ps.	19,016
Development <sup>(3)</sup>		102,559
<b>Total</b>	<b>Ps.</b>	<b>121,576</b>

Note: Numbers may not total due to rounding.

(1) Amounts based on cash basis method of accounting.

(2) Revised budget, as approved by the Board of Directors of Petróleos Mexicanos on February 26, 2016.

(3) Estimated budgets for 2016 are based on the operating fields and exploration areas assigned to us through Round Zero, in accordance with the same criteria used in connection with the approval by the Board of Directors of Petróleos Mexicanos of the revised budget on February 26, 2016.

Source: Pemex Exploration and Production.

#### Investments and Production by Project

We conduct exploration, production and development activities in fields throughout Mexico. Our main projects are Ku-Maloob-Zaap, Tsimin-Xux, ATG, Cantarell, Crudo Ligerito Marino, Burgos, Chuc, Antonio J. Bermúdez, Ogarrio-Sánchez Magallanes and Delta del Grijalva. These projects are described below.

**Ku-Maloob-Zaap Project.** The Ku-Maloob-Zaap project was our most important producer of heavy crude oil and plays an important part in the production of the Maya crude oil mix. It is the most important project in Mexico in terms of total proved hydrocarbon reserves and crude oil production. It is composed of the Ayatsil, Bacab, Lum, Ku, Maloob, Tekel, Utsil and Zaap fields, and extends over an area of 305.7 square kilometers. As of December 31, 2015, there was a total of 237 wells completed, 184 of which were producing. The project produced an average of 853.1 thousand barrels of crude oil per day, 37.6% of our total production, and 556.5 million cubic feet of natural gas per day in 2015. As of December 31, 2015, cumulative production was 4.8 billion barrels of crude oil and 2.4 trillion cubic feet of natural gas. As of December 31, 2015, proved hydrocarbon reserves totaled 3.0 billion barrels of crude oil and 1.6 trillion cubic feet of natural gas. Total proved reserves were 3.3 billion barrels of oil equivalent, of which 2.6 billion barrels of oil equivalent were developed.

In nominal peso terms, our exploration and production segment's capital expenditures for this project were Ps. 29,738 million in 2013, Ps. 34,232 million in 2014 and Ps. 23,507 million in 2015. For 2016, we anticipate that our capital expenditures will be Ps. 20,316 million and that total accumulated capital expenditures for this project

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will reach approximately U.S. \$23.1 billion. In 2015, we paid approximately U.S. \$35.2 million to acquire approximately 244.0 billion cubic feet of nitrogen for the pressure maintenance project in the fifth module of the Cantarell nitrogen cryogenic plant, which began operations in November 2006. In 2016, we expect to spend approximately U.S. \$41.5 million to acquire approximately 215.7 billion cubic feet of nitrogen for injection into the Ku-Maloob-Zaap fields.

***Tsimin-Xux Project.*** This project consists of the Tsimin and Xux fields, which include volatile oil and gas condensate reservoirs in the shallow waters of the Gulf of Mexico. The Tsimin field is located 62 kilometers from the Dos Bocas Marine Terminal in Paraíso, Tabasco, while the Xux field is located on the continental shelf of the Gulf of Mexico, approximately ten kilometers off the coast of Tabasco. During 2015, seven new wells were completed at the Tsimin field and five new wells were completed at the Xux field. During 2015, average daily production at the Tsimin-Xux project totaled 135.2 thousand barrels of crude oil and 579.9 million cubic feet of natural gas. The development plan for this project estimates that average daily production will reach 141.0 thousand barrels of crude oil and 646.0 million cubic feet of natural gas. During 2015, the sales prices of the light and extra-light crude oil produced at this field averaged more than U.S. \$51.46 per barrel, making this one of our most important projects in terms of revenue generation.

As of December 31, 2015, cumulative production totaled 92.5 billion barrels of crude oil and 388.1 trillion cubic feet of natural gas. Proved hydrocarbon reserves totaled 228 million barrels of crude oil and 1.4 trillion cubic feet of natural gas. Total proved reserves were 485.7 million barrels of oil equivalent, of which 438.6 million barrels of oil equivalent were developed.

In nominal peso terms, our exploration and production segment's capital expenditures for the Tsimin-Xux project were Ps. 13,950 million in 2015. In 2016, we expect capital expenditures for this project to total Ps. 9,333 million.

***Aceite Terciario del Golfo Project (formerly Paleocanal de Chicontepec).*** The ATG project is located in the Northern region and covers an area of 4,243 square kilometers. This project comprises 29 fields, which are divided among eight sectors. As of December 31, 2015, there was a total of 4,528 wells completed, of which 2,304 were producing. The project produced an average of 42.0 thousand barrels of crude oil per day in 2015 as compared to 48.8 thousand barrels of crude oil per day in 2014, which represents a 13.9% decrease, and 145.2 million cubic feet of natural gas per day in 2015 as compared to 149.5 million cubic feet of natural gas per day in 2014, which represents a 2.9% decrease. The decrease in crude oil and natural gas production was primarily due to the decline in pressure in certain reservoirs. As of December 31, 2015, cumulative production was 287.2 million barrels of crude oil and 592.8 billion cubic feet of natural gas. As of December 31, 2015, proved reserves totaled 493.0 million barrels of crude oil and 801.5 billion cubic feet of natural gas. Total proved hydrocarbon reserves were 656.8 million barrels of oil equivalent, of which 133.8 million barrels of oil equivalent were developed. During 2015, field development activities at the project included the drilling of 41 wells and the completion of 51 wells, of which 49 were classified as producing, reflecting a success factor of 96.1%. As of December 31, 2015, 70% of the total producing wells were operating with artificial lift systems, such as beam pumps and gas lifts, while the remaining 30% were "flowing wells" that are classified accordingly because they did not require any means of artificial lift.

In nominal peso terms, our exploration and production segment's capital expenditures for the ATG project were Ps. 20,049 million in 2013, Ps. 18,943 million in 2014 and Ps. 2,817 million in 2015. For 2016, we anticipate that our capital expenditures for this project will be Ps. 3,345 million and that total accumulated investments in this project will be approximately U.S. \$13.2 billion.

***Cantarell Project.*** The Cantarell project is located on the continental shelf of the Gulf of Mexico. It consists of the Akal, Chac, Ixtoc, Kambesah, Kutz, Nohoch, Sihil and Takin fields, which extend over an area of 294.4 square kilometers. As of December 31, 2015, there was a total of 559 wells drilled in the Cantarell project, 177 of which were producing. During 2015, the Cantarell business unit, of which the Cantarell project is part, was the fourth most important producer of crude oil in Mexico, averaging 273.4 thousand barrels per day of crude oil. This was 27.1% less than 2014 production, which was 374.9 thousand barrels per day, as a result of the decline of crude oil reserves remaining in these fields. Natural gas production from the Cantarell business unit during 2015 averaged 1,277.1 million cubic feet per day. This was 13.9% more than the 2014 average natural gas production, which was 1,120.9 million cubic feet per day, due to the higher gas-to-oil ratio of the producing wells located close to the secondary gas-cap of the Cantarell reservoir.

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As of December 31, 2015, cumulative production of the Cantarell project was 14.2 billion barrels of crude oil and 8.9 trillion cubic feet of natural gas. As of December 31, 2015, proved hydrocarbon reserves of the Cantarell project totaled 820.5 billion barrels of crude oil and 680.0 trillion cubic feet of natural gas. As of December 31, 2015, total proved reserves were 950.1 million barrels of oil equivalent, all of which were developed.

The Akal field, which is the most important field in the Cantarell project, averaged 99.4 thousand barrels per day of crude oil production during 2015. This was 43.8% less than the average production in 2014, which was 177.0 thousand barrels per day.

In nominal peso terms, our exploration and production segment's capital expenditures for the Cantarell project totaled Ps. 28,171 million in 2013, Ps. 18,276 million in 2014 and Ps. 11,217 million in 2015. For 2016, we budgeted Ps. 11,903 million for capital expenditures for the Cantarell project. By the end of 2016, we expect our capital expenditures to total approximately U.S. \$41.3 billion for this project.

On October 10, 1997, we awarded a build-own-operate contract for a nitrogen cryogenic plant at the Cantarell project to a consortium formed by BOC Holdings, Linde, Marubeni, West Coast Energy and ICA Fluor Daniel. Under this contract, the consortium is responsible for the financing, design, construction and operation of the plant. The plant began operations in 2000 and cost approximately Ps. 10,131 million. Pursuant to the terms of the agreement, Pemex Exploration and Production has the right to acquire the nitrogen plant in the case of a default by the consortium. Pemex Exploration and Production has the obligation to acquire the nitrogen plant if it defaults under the contract. Under the terms of the contract, Pemex Exploration and Production has committed to purchasing 1.2 billion cubic feet per day of nitrogen from the consortium until April 2016, and will thereafter continue to supply service through June 2027 under a new contract.

During 2015, we paid approximately U.S. \$63.9 million under this contract for an approximate total volume of 285.7 billion cubic feet of nitrogen, which was injected into the Cantarell fields. In 2016, our exploration and production segment expects to pay approximately U.S. \$109.9 million under this contract for an approximate total volume of 296.5 billion cubic feet of nitrogen to be injected into the fields.

*Crudo Ligero Marino Project.* In 2013, the Ministry of Finance and Public Credit approved the designation of the Crudo Ligero Marino project as a stand-alone project, thereby separating it from the Strategic Gas Program of which it formed part from 2001 through 2012. In 2013, the Och-Uech-Kax project was integrated into this project. The main objectives for the Crudo Ligero Marino project during the years 2015 to 2037 are to continue constructing six marine structures, in addition to the marine structure completed during 2014, implement secondary recovery techniques at the May and Bolontiku fields and carry out optimization and maintenance activities at its facilities. As of December 31, 2015, a total of 94 wells had been completed at this project, of which 45 were producing. During 2015, average daily production totaled 99.3 thousand barrels of crude oil and 336.1 million cubic feet of natural gas. As of December 31, 2015, cumulative production was 854.2 million barrels of crude oil and 2.3 billion cubic feet of natural gas. Proved hydrocarbon reserves totaled 130.3 million barrels of crude oil and 416.8 billion cubic feet of natural gas. Total proved reserves were 212.2 million barrels of oil equivalent, of which 175.7 million barrels were developed.

In nominal peso terms, our exploration and production segment's capital expenditures for the Crudo Ligero Marino project totaled Ps. 9,275 million in 2015. For 2016, we anticipate our capital expenditures to total Ps. 7,081 million.

*Burgos Project.* The Burgos project is the largest producer of non-associated gas in Mexico. In 1997, our exploration and production segment, through Pemex-Exploration and Production, initiated a development program for the Burgos natural gas fields. The purpose of the Burgos project is to enable us to meet increasing domestic demand for natural gas. The fields in Burgos accounted for 17.2% of our total natural gas production in 2015. The project is located in northeastern Mexico.

During 2015, the Burgos project produced an average of 1,099 billion cubic feet per day of natural gas. As of December 31, 2015, the drilling of 7,969 wells had been completed, 3,221 of which were producing. The most important fields are the Nejo, Arcabuz-Culebra, Cuitláhuac, Cuervito, Velero, Comitas and Santa Anita fields, which together produced 53.3% of the total production of the Burgos project in 2015.

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**Main Fields of the Burgos Project**  
(as of December 31, 2015)

	<b>Nejo</b>	<b>Arcabuz- Culebra</b>	<b>Cuitláhuac</b>	<b>Velero</b>	<b>Cuervito</b>	<b>Santa Anita</b>	<b>Comitas</b>
Total acreage (square kilometers)	209	385	239	103	50	52	71
Developed acreage	204	370	213	99	35	44	62
Undeveloped acreage	5	15	26	4	15	8	9
Wells completed	407	967	442	219	135	79	137
Producing wells	297	609	196	132	93	63	87
2015 production of natural gas (million cubic feet per day)	215	126	78	44	43	36	44
Cumulative production of natural gas (billion cubic feet)	425.0	2,006.0	764.8	324.4	188.0	243.6	200.4
Proved reserves of natural gas (billion cubic feet)	89.6	69.0	125.4	13.2	144.8	48.3	39.7
Proved developed reserves	85.3	51.8	68.1	13.2	66.5	29.3	34.5
Proved undeveloped reserves	4.3	17.2	57.3	0	78.3	19.0	5.2

Source: Pemex Exploration and Production.

From 2010 to 2015, exploration activities and the reclassification of reserves decreased estimated proved reserves in Burgos by 416.5 million barrels of oil equivalent. Production during this period totaled 565.0 million barrels of oil equivalent. During 2015, proved reserves decreased by 50.5 million barrels of oil equivalent, from 261.0 million barrels of oil equivalent in 2014 to 210.5 million barrels of oil equivalent in 2015, primarily due to reduced oil production in 2015, lower prices of hydrocarbons and a decrease in field development activities.

In nominal peso terms, our exploration and production segment's capital expenditures (including capital expenditures made pursuant to FPWCs) for the Burgos project were Ps. 10,316 million in 2013, Ps. 11,695 million in 2014 and Ps. 5,855 million in 2015. For 2016, we anticipate that our capital expenditures for this project will amount to Ps. 3,294 million and that our total accumulated capital expenditures will reach approximately U.S. \$20.5 billion.

**Chuc Project.** The Chuc project is the second largest producer of light crude oil in the Southwestern Marine region, and includes the operation and maintenance of the Pol-A facility and water injection complexes. In 2013, the Ministry of Finance and Public Credit approved the integration of the Caan project into the Chuc project. This project covers an area of 213 square kilometers and has been exploited by our exploration and production segment, through Pemex-Exploration and Production, since 1981. The fields of this project are located on the continental shelf of the Gulf of Mexico, off the coast of the states of Tabasco and Campeche, at a depth of between the 20- and 100-meter isobaths, approximately 132 kilometers from the Dos Bocas Marine Terminal in Paraíso, Tabasco, and 79 kilometers northeast of Ciudad del Carmen, Campeche. The fields in the project include Abkatún, Batab, Caan, Ché, Chuc, Chuhuk, Etkal, Homol, Kanaab, Kuil, Onel, Pol, Taratunich and Tumat. In January 2007, the Pol and Batab projects were merged into the Chuc project. As of December 31, 2015, 107 wells had been completed, of which 68 were producing. During 2015, average production totaled 236.3 thousand barrels per day of crude oil and 352.5 million cubic feet per day of natural gas. As of December 31, 2015, cumulative production totaled 5.6 billion barrels of crude oil and 6.5 trillion cubic feet of natural gas. As of December 31, 2015, proved hydrocarbon reserves totaled 433.0 million barrels of oil and 704.8 billion cubic feet of natural gas, or 556.9 million barrels of oil equivalent. As of December 31, 2015, total proved developed reserves were 377.2 million barrels of oil equivalent.

In nominal peso terms, our exploration and production segment's capital expenditures for the Chuc project were Ps. 9,897 million in 2013, Ps. 10,618 million in 2014 and Ps. 10,037 million in 2015. In 2016, we expect our capital expenditures to be Ps. 8,231 million and anticipate that our total accumulated capital expenditures for this project will reach approximately U.S. \$5.4 billion.

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*Antonio J. Bermúdez Project.* In 2002, we began investing in the Antonio J. Bermúdez project, the main investment project in the Southern region and the fifth largest in Mexico. This project is designed to accelerate reserves recovery, as well as increase the recovery factor by drilling additional wells and implementing a system of pressure maintenance through nitrogen injection. It consists of the Samaria, Cunduacán, Oxiaque, Iride and Platanal fields, and covers an area of 163 square kilometers. As of December 31, 2015, a total of 845 wells had been completed, of which 284 were producing. During 2015, the project produced an average of 64.6 thousand barrels per day of crude oil and 187.7 million cubic feet per day of natural gas. As of December 31, 2015, cumulative production was 2.9 billion barrels of crude oil and 4.5 trillion cubic feet of natural gas. As of December 31, 2015, proved hydrocarbon reserves in this field totaled 359.2 million barrels of crude oil and 1.0 trillion cubic feet of natural gas. As of December 31, 2015, total proved reserves were 603.5 million barrels of oil equivalent, of which 410.5 million were developed.

In nominal peso terms, our exploration and production segment's capital expenditures for the Antonio J. Bermúdez project were Ps. 11,489 million in 2013, Ps. 8,840 million in 2014 and Ps. 5,352 million in 2015. For 2016, we anticipate that our capital expenditures for this project will be Ps. 3,357 million and that our total accumulated investments in the project will reach approximately U.S. \$9.1 billion. In March 2005, we entered into a contract with Praxair México, S. de R.L. de C.V. to build, own and operate a nitrogen cryogenic plant, which was completed in June 2008. After completing testing in July 2008, we began injecting 190 million cubic feet per day of nitrogen into the project. In 2015, we paid approximately Ps. 64.0 million to acquire nitrogen from this plant, which we used to inject approximately 172.3 million cubic feet per day during 2015 for pressure maintenance in connection with the project. Between 2015 and 2022, we plan to continue to inject the same volume of nitrogen.

*Ogarrio-Sánchez Magallanes Project.* The Ogarrio-Sánchez Magallanes project is composed of 21 crude oil and natural gas producing fields and forms part of the Cinco Presidentes business unit. This project is located between the state borders of Veracruz and Tabasco and covers an area of 10,820 square kilometers. From a geological standpoint, this project pertains to the Isthmus Saline basin, specifically the southeastern basins at the Tertiary level. The Ogarrio-Sánchez Magallanes project is geographically bounded by the Gulf of Mexico to the north, the geological folds of the Sierra Madre de Chiapas to the south, the Tertiary basin of Veracruz to the west and the Comcalco Tertiary basin to the east. The primary objective of this project is to increase production levels through the drilling of development wells and infill wells, which are drilled between producing wells to more efficiently recover hydrocarbon reserves, the execution of workovers of wells and the implementation of secondary and enhanced oil recovery processes. In addition, we aim to optimize the infrastructure of this project in order to counteract the decreases in production levels that result from the natural depletion of its reservoirs.

As of December 31, 2015, the Ogarrio-Sánchez Magallanes project had 620 producing wells and 44 new wells had been completed during 2015. Average daily production totaled 87.6 thousand barrels of crude oil and 160.1 million cubic feet of natural gas during 2015. As of December 31, 2015, cumulative production was 1.9 billion barrels of crude oil and 2.4 trillion cubic feet of natural gas. Proved hydrocarbon reserves totaled 159.2 million barrels of crude oil and 270.9 billion cubic feet of natural gas. Total proved reserves were 202.8 million barrels of oil equivalent, of which 181.3 million barrels were developed. In nominal peso terms, our capital expenditures for the Ogarrio-Sánchez Magallanes project were Ps. 4,626 million in 2015. For 2016, we anticipate that our capital expenditures will total Ps. 3,691 million.

*Delta del Grijalva Project.* The Delta del Grijalva project is the most important project in the Southern region in terms of both oil and gas production. The project covers an area of 1,343 square kilometers and has been exploited by our exploration and production segment since 1982. As of December 31, 2015, there was a total of 193 wells drilled, of which 54 were producing. During 2015, the project produced an average of 81.8 thousand barrels per day of crude oil and 312.6 million cubic feet per day of natural gas. The most important fields are Terra, Tizón, Sen and Caparoso-Pijje-Escuintle.

- *Terra.* This field covers an area of 13.7 square kilometers. As of December 31, 2015, a total of 11 wells had been completed, eight of which were producing. During 2015, the field produced an average of 21.2 thousand barrels per day of crude oil and 59.7 million cubic feet per day of natural gas. As of December 31, 2015, cumulative production was 35.7 million barrels of crude oil and 113.7 billion cubic feet of natural gas. Proved hydrocarbon reserves totaled 32.0 million barrels of crude oil and 93.7 billion cubic feet of natural gas. As of December 31, 2015, total proved reserves were 54.3 million barrels of oil equivalent, 25.4 million of which were developed.

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- *Sen.* This field covers an area of 45.1 square kilometers. As of December 31, 2015, a total of 49 wells had been completed, 13 of which were producing. During 2015, the field produced an average of 7.1 thousand barrels per day of crude oil and 25.2 million cubic feet per day of natural gas. As of December 31, 2015, cumulative production was 311.0 million barrels of crude oil and 850.4 billion cubic feet of natural gas. Proved hydrocarbon reserves totaled 25.2 million barrels of crude oil and 76.6 billion cubic feet of natural gas. As of December 31, 2015, total proved reserves were 43.5 million barrels of oil equivalent, 21.1 million of which were developed.
- *Caparoso-Pijje-Escuintle.* This field covers an area of 28.2 square kilometers. As of December 31, 2015, a total of 53 wells had been completed, 12 of which were producing. During 2015, the field produced an average of 13.8 thousand barrels per day of crude oil and 36.4 million cubic feet per day of natural gas. As of December 31, 2015, cumulative production was 226.6 million barrels of crude oil and 635.6 billion cubic feet of natural gas. Proved hydrocarbon reserves totaled 12.0 million barrels of crude oil and 39.7 billion cubic feet of natural gas. As of December 31, 2015, total proved reserves were 21.4 million barrels of oil equivalent, 17.6 million of which were developed.
- *Tizón.* This field covers an area of 17.8 square kilometers. As of December 31, 2015, a total of 16 wells had been completed, eleven of which were producing. During 2015, the field produced an average of 27.0 thousand barrels per day of crude oil and 155.4 million cubic feet per day of natural gas. As of December 31, 2015, cumulative production was 66.0 million barrels of crude oil and 378.2 billion cubic feet of natural gas. Proved hydrocarbon reserves totaled 21.3 million barrels of crude oil and 115.7 billion cubic feet of natural gas. As of December 31, 2015, total proved reserves were 48.9 million barrels of oil equivalent, 42.3 million of which were developed.

As of December 31, 2015, cumulative production in the Delta del Grijalva project was 0.8 billion barrels of crude oil and 2.8 trillion cubic feet of natural gas. Proved hydrocarbon reserves as of December 31, 2015 totaled 102.5 million barrels of crude oil and 361.7 billion cubic feet of natural gas. As of December 31, 2015, total proved reserves were 188.7 million barrels of oil equivalent, 122.7 million of which were developed.

In nominal peso terms, our exploration and production segment's capital expenditures for the Delta del Grijalva project were Ps. 6,169 million in 2013, Ps. 5,348 million in 2014 and Ps. 4,687 million in 2015. In 2016, we expect our capital expenditures to be Ps. 3,088 million, bringing our total capital expenditures for the project to approximately U.S. \$3.8 billion.

#### *Crude Oil Sales*

During 2015, domestic consumption of crude oil amounted to approximately 1,064.0 thousand barrels per day, which represented 46.9% of our total crude oil production. Through PMI's activities, we sold the remainder of our crude oil production abroad. Maya crude oil accounted for 72.1% of exported crude oil volume sold by PMI in 2015. See "—Business Overview—International Trading" in this Item 4.

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The following table sets forth crude oil distribution for the past five years.

#### Crude Oil Distribution

	At December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in thousands of barrels per day)					
<b>Production</b>	2,552.6	2,547.9	2,522.1	2,428.8	2,266.8	(6.7)
<b>Distribution</b>						
Refineries	1,172.3	1,211.0	1,229.1	1,161.1	1,064.0	(8.4)
Export terminals	1,342.9	1,268.3	1,190.4	1,148.6	1,177.7	2.5
Total	2,515.2	2,479.3	2,419.5	2,309.7	2,241.7	(2.9)
<b>Statistical differences in stock measurements<sup>(1)</sup></b>	37.4	68.6	102.6	119.1	25.2	(78.8)

Note: Numbers may not total due to rounding.

(1) Includes measurement inconsistencies, shrinkage and leakage, naphthas and condensates added to crude oil.

Source: Pemex Exploration and Production.

Differences between the volume of crude oil measured at the wellhead and the volume distributed reflect customary adjustments due to, among other things, shifting inventories, evaporation, shrinkage and product segregation. In August 2014, we identified increases in the difference between the volumes of crude oil production and distribution. Based on an analysis conducted in coordination with the NHC, we implemented various corrective measures to improve our measurement methodology and management system, including continuously monitoring our wells, calibrating our measurement equipment and installing additional crude oil dehydration systems. To this end, sediment tanks have also been installed at marine terminals in order to accelerate water evaporation and crude oil stabilization in accordance with industry standards. In addition, crude oil barrels undergo a stabilization process in preparation for export, which involves certification by us, the buyer and a third party to verify that the contents meet international standards and contain no more than 0.5% water.

#### Gas Flaring

The flaring of produced gas, which consists of the burning off of surplus combustible vapors from a well, usually occurs as a result of operational adjustments to carry out maintenance at production facilities, and in some cases is due to limitations in the ability to handle, process or transport natural gas. In addition, the flaring of produced gas is also used as a safety measure to relieve well pressure. Gas flaring is considered to be one of the most significant sources of air emissions from offshore oil and gas installations. In 2015, gas flaring represented 6.8% of total natural gas production, as compared to 3.8% in 2014, primarily due to an explosion that occurred at the Abkatún-A Permanente platform on April 1, 2015 and delays in the completion of works for gas utilization on marine rigs. For more information on the Abkatún-A explosion, see “—Environmental Regulation—PEMEX’s Internal Monitoring” in this Item 4. We continue to implement programs to reduce gas flaring and improve gas extraction efficiency, including strategies to optimize the exploitation of wells with high associated gas content at the Cantarell project.

#### Pipelines

The crude oil and natural gas pipeline network owned by our exploration and production segment connects crude oil and natural gas producing centers with refineries and petrochemical plants. At the end of 2015, this pipeline network consisted of approximately 42,025 kilometers of pipelines, of which 1,160 kilometers were located in the Northeast Marine region, 1,019 kilometers were located in the Southeast Marine region, 8,634 kilometers were located in the Southern region, 25,988 kilometers were located in the Northern region and 5,225 kilometers are distribution and commercial pipelines. For a description of products transported by the pipeline network, see “—Business Overview—Logistics” in this Item 4.

#### Integrated Exploration and Production Contracts and Financed Public Works Contracts

Our FPWC program, previously known as the Multiple Services Contracts program, was first announced in December 2001. The objective of the program was to provide a contractual framework that promotes efficient



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execution of public works in order to increase Mexico's hydrocarbons production. The FPWC were public works contracts based on unit prices that aggregate a number of different services into a single contract. Under the FPWC framework, Pemex-Exploration and Production retained the rights and title to all hydrocarbons produced and works performed under each FPWC.

Our Integrated E&P Contracts program was established as part of reforms to the Mexican energy sector enacted in 2008. The objective of these Integrated E&P Contracts was to increase our execution and production capabilities. The hydrocarbons reserves located in and extracted from the areas to which we have a legal right, continue to be owned exclusively by the Mexican Government. Under this program, payments to the contractors were made on a per-barrel basis, plus recovery costs, provided that the payments did not exceed our cash flow from the particular block.

We may amend our Integrated E&P Contracts and FPWCs in order to align these contracts, which were entered into prior to the enactment of the Secondary Legislation, that are required to give effect to the Energy Reform Decree, with the new contractual framework established under the Hydrocarbons Law. Accordingly, an existing Integrated E&P Contract or FPWC may be migrated into a contract for exploration and production upon agreement by the contract parties to the technical guidelines established by the Ministry of Energy (after seeking our favorable opinion) and the financial terms determined by the Ministry of Finance and Public Credit. Upon approval by the contract parties, the existing Integrated E&P Contract or FPWC will be replaced by the new contract for exploration and production without the need for a bidding process. If the contract parties do not agree to the proposed technical guidelines and contractual and financial terms, the original Integrated E&P Contract or FPWC will remain in effect.

On December 19, 2014, we and the relevant counterparties requested that the Ministry of Energy migrate the Integrated E&P Contracts governing the Santuario, Magallanes, Altamira, Arenque, Ébano, Miquetla and Pánuco blocks, and the FPWC governing the Misión and Olmos blocks, into new contracts for exploration and production. Parties to the Integrated E&P contracts governing the Nejo and San Andrés blocks made similar requests on November 24, 2015 and December 1, 2015. As part of the migration process, the Ministry of Energy, Ministry of Finance and Public Credit and the NHC requested further information on the proposed fiscal and technical terms of the new contracts, which Pemex Exploration and Production has provided. On December 7, 2015 and January 29, 2016, the parties to the Altamira and San Andrés blocks withdrew their request for migration.

We plan to migrate the Integrated E&P Contract corresponding to the Santuario block in the Southern region of Mexico and the FPWC corresponding to the Misión block of the Burgos business unit in the Northern region into contracts for exploration and production in the first six months of 2016. As of the date of this report, Pemex Exploration and Production, the Ministry of Energy and Ministry of Finance and Public Credit have not reached an agreement on the fiscal and technical terms of the new contracts, and we have not migrated any of the Integrated E&P contracts or FPWCs.

Among other FPWC works during 2015, two wells were drilled in the Burgos project under the FPWC program, which represents approximately 5.4% of all wells drilled in Burgos. Also in 2015, two development wells were completed. One of these completed wells was productive. The works carried out in 2015 represented an investment of approximately U.S. \$6.6 million. By the end of 2015, natural gas production in the existing FPWC blocks reached 155.7 million cubic feet per day, which represents approximately 15.4% of all natural gas production from Burgos during 2015.

During 2015, contractors expended approximately U.S. \$949.0 million in connection with Integrated E&P Contracts. By the end of 2015, production in the existing Integrated E&P blocks reached 56.8 thousand barrels per day of crude oil and 253.4 million cubic feet per day of natural gas, for a total of 107.5 thousand barrels of oil equivalent per day.

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### *Collaboration and Other Agreements*

Pemex Exploration and Production, or its predecessor Pemex-Exploration and Production, have entered into non-commercial scientific and technology agreements with the following parties, which as of the date of this report remain in effect:

- Petrobank Energy and Resources, Ltd., Seabird Exploration Americas, Inc. and Total Cooperation Technique Mexique, S.A.S. during 2011;
- BP Exploration Operating Co. Ltd. during 2012;
- Statoil Mexico A.S., ExxonMobil Ventures Mexico Ltd., Japan Oil, Gas and Metals National Corporation, Chevron Deepwater Mexico Inc., BG North America LLC, Itera Group LLC, Ecopetrol S.A. (memorandum of understanding and cooperation signed in conjunction with Pemex-Refining and Pemex-Gas and Basic Petrochemicals) and Aerojet Rocketdyne, Inc. during 2013; and
- Bridas Corporation, Hunt Oil Company, McCombs Family Partners Ltd., BP Exploration Operating Co. Ltd., Evercore Energy Group, Pluspetrol, GALP (memorandum of understanding signed in conjunction with Pemex-Gas and Basic Petrochemicals and Petróleos Mexicanos), BHP Billiton, Japan Oil, Gas and Metals National Corporation (memorandum of understanding signed in conjunction with Pemex-Gas and Basic Petrochemicals and Petróleos Mexicanos) and ONGC during 2014.

Pemex Exploration and Production did not enter into any collaboration agreements in 2015.

Through these agreements, we seek to increase our technical and scientific knowledge in areas including deepwater subsalt exploration and drilling; enhanced oil recovery processes, such as air injection; and reservoir characterization of complex structures. These broad agreements of technological and scientific collaboration are strictly non-commercial, *i.e.*, there is no transfer of resources and they do not establish a binding relationship among the parties.

### **Drilling and Services**

Our new drilling and services segment operates through the productive state-owned subsidiary Pemex Drilling and Services, which was created effective August 1, 2015 and has assumed the functions of the drilling business unit of Pemex-Exploration and Production, the equipment and contracts of which were transferred to Pemex Drilling and Services. This segment provides drilling, completion, work-over and other services for wells in offshore and onshore fields. Pemex Drilling and Services currently provides services primarily to Pemex Exploration and Production. Pemex Drilling and Services also intends to provide services to third parties in Mexico and is pursuing partnerships and other means to increase business with private sector companies.

As disclosed above, for the year ended December 31, 2015, we have presented operating results for our drilling and services segment together with results for our exploration and production segment. We have summarized some of these results below. For additional results for this segment, please see “—Exploration and Production—Exploration and Drilling” above in this Item 4. Operating results for these segments will be presented separately for periods beginning January 1, 2016. When reviewing these results, please note that our exploration and production segment received drilling services from not only our drilling and services segment but also from third parties. Accordingly, the amounts presented above under drilling activity do not relate only to services provided by our drilling and services segment. For more information on our corporate restructuring and our new operating segments, see “—History and Development—Corporate Reorganization.” For a detailed description of the financial results of each segment, see our consolidated financial statements included herein.

During 2015, we drilled 138 wells, 74 onshore and 64 offshore; completed 138 wells, 70 onshore and 38 offshore; and made 863 workovers, 731 onshore and 132 offshore. Those interventions were performed with an average of 101 drilling and workover rigs, 50 terrestrial and 51 marine. Moreover, we conducted 35,086 well services in 2015, of which 52.6% were wireline operations, 25.5% were cementing jobs, 19.1% were logging operations and perforations and 2.8% were coiled tubing operations.

Given the current state of the oil and gas industry, the demand for well drilling and other services decreased in 2016 by about 44.5% as compared to 2015. In 2016 we expect to operate an average of 50 rigs—25 land and 25 marine—which represents a 50.5% decrease as compared to 2015. Of these, we expect that 31—25 land and 6 marine—will be rigs we own, which is a 52.3% decrease as compared to 2015. By the end of 2016, we expect to be operating a total of 27 rigs—10 land and 17 marine—which is a 73.3% decrease as compared to the end of 2015. We anticipate an increase in rig use for 2017.

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As part of our 2012 modernization program, two offshore modular drilling rigs are being constructed and should be delivered in 2016. These rigs will be financed through monthly payments over the course of 10 years. We also expect to receive two 3,000 hp land rigs in 2016 in return for an investment of U.S. \$360.3 million.

*Investments in Drilling and Services*

Our drilling and services segment invested Ps. 1,564 million on capital expenditures in 2015, which was allocated among the following acquisitions:

- Ps. 723.0 million to acquire two modular drilling rigs;
- Ps. 553.0 million to acquire two jack-up platforms; and
- Ps. 288.0 million to acquire nine land-based drilling rigs.

*2016 Drilling and Services Capital Expenditures Budget*

Our drilling and service segment's 2016 budget includes Ps. 1,663.0 million in capital expenditures, which was allocated among the following ongoing projects as follows:

- Ps. 714.0 million to acquire and modernize equipment for the drilling and repair of wells;
- Ps. 482.0 million to acquire two jack-up platforms;
- Ps. 227.0 million to acquire nine land-based drilling rigs;
- Ps. 162.0 million to acquire two modular drilling rigs; and
- Ps. 78.0 million to acquire two modular drilling rigs.

**Refining**

*Refining Processes and Capacity*

Our refining segment's production processes include the following:

- *Atmospheric distillation.* This process heats crude oil in a tube furnace at atmospheric pressure to distill refined products. The primary products produced are gasoline, kerosene, jet fuel, diesel, atmospheric gas oil and atmospheric residual crude oil.
- *Vacuum distillation.* This process heats crude oil or other feedstock in a vacuum distillation column, which is operated at low pressures. The objective of this process is to maximize production of heavy vacuum gas oil, which is produced by boiling crude oil.
- *Cracking.* This process uses either heat and pressure or a catalytic agent to increase gasoline yields from crude oil.
- *Visbreaking.* This is a thermal cracking process, which uses a horizontal-tube heater fired to a high temperature. Visbreaking reduces flasher bottom viscosity and produces some heavy gas oil.
- *Reforming processes.* These processes use heat and catalysts to transform smaller or unstable hydrocarbon molecules into larger, more useful refining or blending products. For example, we use reforming processes to convert low octane gasoline into higher octane stocks that are suitable for blending into finished gasoline and to convert naphthas into more volatile, higher octane products.
- *Hydrotreatment or residual hydrocracking.* This process uses a catalyst and hydrogen at high temperature and pressure to remove sulfur, nitrogen and some aromatic compounds. Hydrotreatment also processes some lighter liquid product off-take.

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- *Alkylation and isomerization.* This polymerization process unites olefins and isoparaffins. Butylenes and isobutanes are combined with sulfuric acid or hydrofluoric acid to rearrange straight-chain hydrocarbon molecules into branched-chain products. Pentanes and hexanes, which are difficult to reform, are isomerized through the use of aluminum chloride and other precious-metal catalysts. Normal butane may be isomerized to provide a portion of the isobutane feed needed for the alkylation process. The process produces a high octane, low sensitivity blending agent for gasoline.
- *Coking.* This process is a severe method of thermal cracking used to upgrade heavy residuals into lighter products or distillates. Coking produces straight-run gasoline (coker naphtha) and various middle-distillate fractions used as catalytic feedstock, thus generating a concentrated solid material called coke of petroleum.

These production processes together constitute our production capacity as set forth in the table below.

### Refining Capacity by Production Process

Production Process	At December 31,				
	2011	2012	2013	2014	2015
	(in thousands of barrels per day)				
Atmospheric distillation	1,690.0	1,690.0	1,690.0	1,602.0	1,640.0
Vacuum distillation	832.0	832.0	832.0	767.5	772.4
Cracking	422.5	422.5	422.5	422.5	422.5
Visbreaking	91.0	91.0	91.0	91.0	91.0
Reforming	279.3	279.3	279.3	279.3	279.3
Hydrotreatment	1,067.5	1,067.5	1,067.5	1,067.5	1,099.9
Alkylation and isomerization	141.9	155.3	155.3	154.3	154.7
Coking	155.8	155.8	155.8	155.8	155.8

Source: Base de Datos Institucional (Pemex Institutional Database, or Pemex BDI).

As of December 31, 2015, we owned and operated six refineries: Cadereyta, Madero, Minatitlán, Salamanca, Salina Cruz and Tula. Our refineries consist of atmospheric and vacuum distillation units, where the bulk of crude oil input is processed. Secondary processing facilities include desulfurization units and facilities for catalytic cracking, reforming and hydrotreating. During 2015, our refineries processed 1,065 thousand barrels per day of crude oil (159 thousand barrels per day at Cadereyta, 129 thousand barrels per day at Madero, 152 thousand barrels per day at Minatitlán, 149 thousand barrels per day at Salamanca, 240 thousand barrels per day at Salina Cruz and 236 thousand barrels per day at Tula), which in total consisted of 581 thousand barrels per day of Olmeca and Isthmus crude oil and 484 thousand barrels per day of Maya crude oil.

Since 1993, through our subsidiary company, P.M.I. Norteamérica, S.A. de C.V., we have participated in a limited partnership with Shell Oil Company in a refinery located in Deer Park, Texas, which has the capacity to process 340 thousand barrels per day of crude oil. Under the Deer Park Limited Partnership agreement, P.M.I. Norteamérica, S.A. de C.V. and Shell Oil Company each provide 50% of the refinery's crude oil input and own 50% of the refinery's output. This agreement is limited to the specific purpose of operating the Deer Park refinery.

### Production

We produce a wide range of products derived from crude oil and natural gas, including LPG, gasoline, jet fuel, diesel, fuel oil, asphalts, lubricants and other refined products. We produced 1,114 thousand barrels per day of refined products (including dry gas by-products of the refining process) in 2015, a decrease of 7.6% from 2014 levels. This decrease in refined products production was mainly due to a decrease in crude oil processing and to operational issues in the national refining system.

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The following table sets forth, by category, our production of petroleum products from 2011 through 2015.

### Refining Segment Production

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in thousands of barrels per day)					
<b>Refinery Crude Oil Runs</b>	1,166.6	1,199.3	1,224.1	1,155.1	1,064.5	(7.8)
<b>Refined Products</b>						
Liquefied petroleum gas	21.4	25.2	25.2	26.4	21.4	(18.9)
Gasoline						
Pemex Magna	324.2	336.8	360.5	290.9	272.5	(6.3)
Ultra-Low Sulfur Magna	61.7	61.5	56.7	99.1	88.4	(10.8)
Pemex Premium <sup>(1)</sup>	13.7	19.7	19.8	30.8	16.8	(45.5)
Base	0.7	0.0	0.2	0.8	3.6	350.0
Total	400.3	418.1	437.3	421.6	381.4	(9.5)
Kerosene (Jet fuel)	56.3	56.6	60.8	53.4	47.8	(10.5)
Diesel						
Pemex Diesel <sup>(2)</sup>	193.6	225.9	217.7	186.9	191.5	2.5
Ultra-Low Sulfur Diesel	80.1	72.6	92.1	97.8	83.0	(15.2)
Others	0.1	1.0	3.7	1.9	0.2	(89.5)
Total	273.8	299.6	313.4	286.6	274.7	(4.2)
Fuel oil	307.5	273.4	268.8	259.2	237.4	(8.4)
Other refined products						
Asphalts	26.1	23.1	18.7	23.9	17.7	(25.9)
Lubricants	3.7	3.9	4.4	3.7	2.3	(37.8)
Paraffins	0.7	0.8	0.7	0.6	0.5	(16.7)
Still gas	62.6	67.8	70.7	63.9	62.2	(2.7)
Other refined products <sup>(3)</sup>	37.9	57.3	75.7	66.7	68.9	3.3
Total	131.0	152.9	170.2	158.8	151.6	(4.5)
<b>Total refined products</b>	<u>1,190.2</u>	<u>1,225.9</u>	<u>1,275.8</u>	<u>1,206.1</u>	<u>1,114.3</u>	<u>(7.6)</u>

Note: Numbers may not total due to rounding.

(1) Pemex Premium is an ultra-low sulfur gasoline with 0.003% sulfur content.

(2) Pemex Diesel is sold in the northern border market with 0.0015% sulfur content.

(3) Includes mainly coke, along with other products such as aeroflex 1-2, furfural extract and light cyclic oil.

Source: Pemex BDI.

Fuel oil, automotive gasoline and diesels represent the bulk of our production. In 2015, gasoline represented 34.2%, diesel fuel represented 24.6% and fuel oil represented 21.3% of total petroleum products production. Jet fuel represented 4.3% and LPG represented 1.9% of total production of petroleum products in 2015. The remainder, 13.7%, of our production consisted of a variety of other refined products.

As a result of our strategy of investing in technology to improve the quality of our fuels, all of our automotive gasoline production now consists of unleaded gasoline. In addition, we have introduced new environmentally sound products such as ultra-low sulfur gasoline (or ULSG) and ultra-low sulfur diesel (or ULSD). We also promote LPG as an environmentally sound substitute fuel for gasoline in motor vehicles.

### Domestic Sales

We market a full range of refined products, including gasoline, jet fuel, diesel, fuel oil and petrochemicals. We are one of a few major producers of crude oil worldwide that experiences significant domestic demand for our refined products.

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For the five years ended December 31, 2015, the value of our domestic sales of refined products and petrochemicals was as follows:

**Value of Refining Segment's Domestic Sales<sup>(1)</sup>**

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in millions of pesos) <sup>(2)</sup>					
<b>Refined Products</b>						
Gasoline						
Pemex Magna	Ps. 300,936.8	Ps. 326,187.2	Ps. 340,750.7	Ps. 347,952.4	Ps. 274,006.9	(21.3)
Pemex Premium	27,520.1	42,486.0	63,723.1	80,058.9	81,813.5	2.2
Aviation fuels	353.4	396.2	370.8	358.1	323.7	(9.6)
Others	59.9	95.6	43.4	29.5	16.1	(45.4)
Total	328,870.2	369,165.1	404,887.9	428,398.8	356,160.2	(16.9)
Kerosene						
Jet fuel	31,560.2	36,336.5	35,417.9	36,449.3	27,077.2	(25.7)
Other kerosenes	215.9	224.0	275.4	432.5	588.3	36.0
Total	31,776.1	36,560.5	35,693.3	36,881.8	27,665.5	(25.0)
Diesel						
Pemex Diesel	142,559.8	163,113.6	178,929.4	194,545.6	139,796.2	(28.1)
Others	23,681.4	30,609.0	32,542.0	31,156.7	22,930.4	(26.4)
Total	166,241.2	193,722.6	211,471.4	225,702.4	162,726.7	(27.9)
Fuel oil						
Total	80,265.5	99,839.9	78,001.8	46,838.3	25,906.0	(44.7)
Other refined products						
Asphalts	10,539.1	11,165.0	7,865.4	10,788.0	7,575.5	(29.8)
Lubricants	3,153.8	3,097.7	2,991.2	2,618.9	1,297.5	(50.5)
Paraffins	304.2	377.1	339.4	319.2	257.9	(19.2)
Coke	104.5	346.3	473.4	763.3	669.5	(12.3)
Total	Ps. 14,101.6	Ps. 14,986.1	Ps. 11,669.4	Ps. 14,489.4	Ps. 9,800.4	(32.4)
<b>Total Refined Products</b>	<u>Ps. 621,254.5</u>	<u>Ps. 714,274.2</u>	<u>Ps. 741,723.8</u>	<u>Ps. 752,310.8</u>	<u>Ps. 582,258.9</u>	<u>(22.6)</u>
<b>Petrochemicals<sup>(3)</sup></b>	Ps. 4,424.3	Ps. 6,544.9	Ps. 6,957.7	Ps. 7,669.1	Ps. 3,965.2	(48.3)

Note: Numbers may not total due to rounding.

(1) Excludes IEPS tax and value added tax. See “—Taxes, Duties and Other Payments to the Mexican Government” in this Item 4.

(2) Figures are stated in nominal pesos. See “Item 3—Key Information—Selected Financial Data.”

(3) Petrochemical products produced at refineries operated by our refining segment.

Source: Pemex BDI.

The largest consumers of fuels in Mexico are the *Comisión Federal de Electricidad* (Federal Electricity Commission) and our productive state-owned subsidiaries. The Federal Electricity Commission consumed approximately 88.6% of our fuel oil production during 2015, pursuant to a fuel oil supply contract entered into in November 1995 and amended effective January 1, 2005. Pursuant to this amendment, the minimum amount of fuel oil that we agreed to supply to the Federal Electricity Commission during 2015 was 55,500 barrels per day, in accordance with our supply capacity and the requirements of the Federal Electricity Commission under its official program of substitution of fuel oil with natural gas. The price per cubic meter of the fuel oil supplied to the Federal Electricity Commission is based on the three-month average spot price per cubic meter of Fuel Oil No. 6 (3% sulfur) at Houston, Texas, as quoted in Platt's U.S. Marketscan and adjusted for quality and transportation cost differentials. In addition, the price of the fuel oil is discounted by a commercial margin on each cubic meter of fuel oil. In 2015, this volume discount amounted to approximately 0.8% of our total fuel oil sales to the Federal Electricity Commission. The contract can be terminated by either party upon six months' notice. The total amount paid to us by the Federal Electricity Commission under this contract in 2015 was Ps. 23,149 million, which represented 4.0% of our total revenues from domestic sales of refined products.

In 2015, our domestic sales of refined products decreased by Ps. 170,052 million, or 22.6% in value, as compared to 2014 levels. This decrease was primarily due to a 22.0% decrease in prices for refined products, leading to a 16.9% decrease in domestic sales of gasoline, a 27.9% decrease in domestic sales of diesel and a 44.7% decrease in the sales of fuel oil.

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The volume of our domestic sales of refined products for the five-year period ended December 31, 2015 was distributed as follows:

### Volume of Refining Segment's Domestic Sales

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in thousands of barrels per day, except where otherwise indicated)					(%)
<b>Refined Products</b>						
Gasoline						
Pemex Magna	738.6	715.3	667.6	639.1	638.0	(0.2)
Pemex Premium	60.5	87.7	119.2	137.1	154.8	12.9
Aviation fuels	0.5	0.5	0.5	0.4	0.5	25.0
Others	0.1	0.2	0.1	—	—	—
Total	799.7	803.7	787.3	776.7	793.3	2.1
Kerosenes						
Jet fuel	56.1	59.3	62.2	66.5	70.8	6.5
Other kerosenes	0.6	0.6	0.7	0.9	1.2	33.3
Total	56.8	59.9	62.9	67.5	72.0	6.7
Diesel						
Pemex Diesel	330.6	339.4	333.2	336.4	330.6	(1.7)
Others	52.9	61.1	58.5	53.0	54.2	2.3
Total	383.6	400.5	391.7	389.4	384.7	(1.2)
Fuel oil						
Total	200.6	214.4	189.3	121.7	111.7	(8.2)
Other refined products						
Asphalts	24.6	22.3	17.3	21.7	15.9	(26.7)
Lubricants	4.2	4.1	4.7	4.0	2.6	(35.0)
Paraffins	0.8	0.8	0.7	0.6	0.6	—
Coke	31.0	49.8	47.8	46.0	45.9	(0.2)
Total	60.6	77.1	70.6	72.3	65.0	(10.1)
Total refined products	1,501.2	1,555.5	1,501.8	1,427.6	1,426.7	(0.1)
<b>Petrochemicals<sup>(1)</sup></b>	292.0	656.3	743.4	708.7	622.9	(12.1)

Note: Numbers may not total due to rounding.

(1) In thousands of metric tons. These are petrochemical by-products of the refining process produced and sold by our refining segment.

Source: Pemex BDL

The volume of our domestic gasoline sales increased by 2.1% in 2015, from 776.7 thousand barrels per day in 2014 to 793.3 thousand barrels per day in 2015. The volume of our domestic diesel sales decreased by 1.2%, from 389.4 thousand barrels per day in 2014 to 384.7 thousand barrels per day in 2015. The volume of our domestic sales of fuel oil decreased by 8.2%, from 121.7 thousand barrels per day in 2014 to 111.7 thousand barrels per day in 2015, primarily due to a decrease in the Federal Electricity Commission's demand for fuel oil based on its substitution of fuel oil with natural gas.

Since 1998, at the retail level, we have offered standard and premium grades of unleaded gasoline throughout Mexico. Since October 2006, all Pemex Premium gasoline has had an ultra-low sulfur content of 0.003%. Since January 2007, diesel sold at the northern border of Mexico has had a sulfur content of 0.0015%. We have also all been focused on building and enhancing our brands. All of Mexico's independent gasoline service stations now participate in our franchise program, which provides financial assistance to upgrade equipment and facilities, as well as technical assistance in the development of marketing and customer service programs. At the end of 2015, there were 11,210 retail service stations in Mexico franchised or owned by Pemex Industrial Transformation, of which 11,163 were privately owned and operated as franchises and 47 were owned by Pemex Industrial Transformation. This total number of retail service stations represented an increase of 3.5% from the 10,830 service stations as of December 31, 2014.

As a result of the recent energy reform, starting April 2016, the Mexican Government will allow private companies to import gasoline into Mexico subject to retail price controls, including price minimums and maximums. Independently owned PEMEX franchises, in particular, may choose to import gasoline from abroad rather than exclusively rely on our fuel, which will reduce the volume of our domestic gasoline sales. For more information regarding the impact of the Secondary Legislation on retail sales, see "—History and Development—Recent Energy Reform" above in this Item 4.

#### Pricing Decrees

The recent energy reform provides for fuel price liberalization beginning January 2018. At that time, subsidies will either be eliminated altogether or targeted to low income groups. Our sales will continue to be regulated by the Energy Regulatory Commission until COFECE determines that there is effective competition in the wholesale market.

Historically, the Mexican Government has established periodic increases on the price of gasoline. From January 5 to December 31, 2013, prices increased eleven Mexican cents per liter per month. From January 1 to December 31, 2014, periodic increases ranged from nine to eleven Mexican cents per liter per month. On January 1, 2014, pursuant to the *Impuesto a los Combustibles Fósiles* (IEPS Tax on Fossil Fuels) approved under the *Ley del Impuesto Especial sobre Producción y Servicios* (Special Tax on Production and Services Law, or the IEPS Law), unleaded gasoline became subject to a one-time price increase of ten Mexican cents per liter. See "—Information on the Company—Taxes, Duties and Other Payments to the Mexican Government" in this Item 4. For the period from January 1 to December 31, 2015, the Mexican Government eliminated these periodic price increases in favor of a one-time price increase of 26 Mexican cents per liter of magna gasoline and 27 Mexican cents per liter of premium gasoline. From January 1, 2016, the Mexican Government established a mechanism to determine prices that (1) takes into account international market prices, subject to predetermined minimum and maximum prices; (2) adds a flat IEPS Tax; and (3) adds a supplemental fee. From January 1, 2016 to March 1, 2016, prices were 41 to 43 Mexican cents lower per liter as compared to 2015. For more information, see "Item 5—Operating and Financial Review and Prospects—IEPS Tax, Hydrocarbon Duties and Other Taxes."

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The Mexican Government has also established periodic increases on the price of diesel. From January 5 to December 31, 2013, prices increased eleven Mexican cents per liter per month. On January 1, 2014, pursuant to the IEPS Tax on Fossil Fuels, diesel became subject to a one-time price increase of thirteen Mexican cents per liter. From January 1 to December 31, 2014, periodic increases continued at a rate of eleven Mexican cents per liter per month. For the period January 1 to December 31, 2015, the Mexican Government eliminated these periodic price increases in favor of a one-time price increase of 26 Mexican cents per liter. From January 1, 2016, the Mexican Government established a mechanism to determine prices that takes into account international market prices, subject to minimum and maximum prices, and adds a flat IEPS Tax. From January 1, 2016 to March 1, 2016, this amounted to a 43 Mexican cent decrease compared to the same period in 2015.

Since the early 1980s, the Mexican Government has also established a discount of 30% on the price at which we sell gas oil intended for domestic use to the state of Chihuahua during the months of January, February and December of each year. On January 1, 2014, pursuant to the IEPS Tax on Fossil Fuels, such gas oil became subject to a one-time price increase of 10.857 Mexican cents per liter. Gas oil became subject to a one-time price increase of 11.307 Mexican cents per liter in 2015 and 11.558 Mexican cents per liter as of January 1, 2016.

Since December 2008, the price at which we sell fuel oil to the Federal Electricity Commission has been linked to international market prices in accordance with a pricing methodology established by the Mexican Government. This methodology is based on the price of fuel oil in the U.S. Gulf of Mexico coastal region, and is then adjusted for quality as well as expenses related to distribution.

On January 1, 2015, the IEPS Tax on Fossil Fuels of 14.00 Mexican cents per liter of fuel oil became effective through the fiscal year ended December 31, 2015. As of January 1, 2016, fuel oil became subject to a premium of 14.31 Mexican centers per liter.

The Mexican Government could modify these price controls or impose additional price controls in the future. See “Item 3—Key Information—Risk Factors—Risk Factors Related to our Relationship with the Mexican Government—The Mexican Government has imposed price controls in the domestic market on our products.”

### *Investments*

Over the past several years, we have focused our investment program on enhancing the quality of the gasoline and diesel we produce to meet new environmental standards in Mexico, improving our ability to process heavy crude oils in order to optimize the crude oil blend in our refineries and increasing the production of unleaded gasoline and diesel to supply growing demand at low cost, as opposed to increasing our overall crude oil processing capacity. This focus is primarily the result of the abundance of heavy crude oils in Mexico. In addition, due to the reduced availability of heavy crude oil in export markets, the lower cost of raw materials in Mexico leads to higher profit margins on the heavy crude oil we do export.

In the medium term, we will continue to import unleaded gasoline to satisfy domestic demand. During 2015, we imported approximately 427.1 thousand barrels per day of unleaded gasoline, which represented approximately 53.8% of total domestic demand for unleaded gasoline in that year. In 2015, we invested Ps. 29,646 million in capital expenditures. Of this total investment, we allocated Ps. 9,045 million to our fuel quality investments, including Ps. 4,415 million to the gasoline phase and Ps. 4,630 million to the diesel phase of our Fuel Quality Project, Ps. 913 million to the residual conversion from the Salamanca refinery, Ps. 4,674 million to the reconfiguration of the Miguel Hidalgo refinery in Tula, Ps. 561 million to a new refinery in Tula, Ps. 100 million to the Tuxpan pipeline and corresponding storage and distribution terminals and Ps. 14,353 million to investments related to other projects. The following sections provide a description of each of these projects.



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On December 8, 2015, President Enrique Peña Nieto announced investment plans to be carried out by Petróleos Mexicanos over the next three years. These projects, which will involve some private sector investments, aim to reduce greenhouse gas emissions by promoting cleaner fuels and to increase crude-oil processing capacity. Certain of these projects, such as the fuel quality project (formerly called the Clean Fuels Project), the reconfiguration of the Miguel Hidalgo Refinery in Tula and the reconfiguration of the Salamanca Refinery are part of projects that were already being developed by us.

### *Fuel Quality Project*

Our Fuel Quality Project is being developed in our six refineries, with a first phase involving the installation of eight ULSG post-treatment units, the capacities of which are set forth below by refinery. The first phase of this project is being carried out at each of the following sets of our refineries: set 1, Tula and Salamanca (which are 96.4% and 97.0% complete, respectively), with construction expected to be completed by the second quarter of 2016; set 2, Cadereyta and Madero (which are both 100% completed); and set 3, Minatitlán and Salina Cruz (which are 100% and 96.4% complete, respectively), with the commencement of operations at Minatitlán in October 2015 interrupted due to lack of fuel, and the construction of Salina Cruz expected to be completed by the second quarter of 2016.

	<u>Cadereyta</u>	<u>Madero</u>	<u>Minatitlán</u>	<u>Salamanca</u>	<u>Salina Cruz</u>	<u>Tula</u>
ULSG units (tbpd)	1 (42)	2 (20)	1 (25)	1 (25)	2 (25)	1 (30)

Note: tbpd = thousand barrels per day.

ULSG: Ultra Low Sulfur Gasoline

Source: Pemex Industrial Transformation.

In addition to our ULSG post-treatment units, we have entered into the following contracts for phase one of our fuel quality project: tanks at our Tula, Salamanca and Salina Cruz refineries; laboratories at our Tula, Salamanca, Salina Cruz, Minatitlán and Madero refineries; parasitic gasoline at our Tula and Salamanca refineries; a steam condensation station at our Salamanca refinery; a turbogenerator TG-204 at our Cadereyta and turbogenerator TG-8 at our Madero refineries; and a *Sistema Integral de Mezcla en Línea Optimizado Automático* (SIMLOA) at our Tula and Cadereyta refineries. As of the date of this annual report, our overall progress on these contracts for each of the refineries is: 71.7% at our Tula refinery, 71.8% at our Salamanca refinery, 95.3% at our Salina Cruz refinery, 100% at our Minatitlán refinery, 75.6% at our Cadereyta refinery and 95.8% at our Madero refinery.

The second phase of the Fuel Quality Project involves the construction of five new ULSD facilities and the reconfiguration of 17 existing units, as well as the installation of five hydrogen production units, four sulfur recovery units, and five sour water treatment units. This portion of the project will be carried out in two stages: (1) a Cadereyta diesel stage and (2) a diesel stage for the five remaining refineries. The Front End Engineering Design (or FEED) phase for the Cadereyta diesel stage was completed in 2010 and an independent expert delivered his final due diligence report in February 2012. Construction began in March 2013 and is expected to be completed by the fourth quarter of 2017. As of the date of this report, construction is 49.1% complete. The FEED phase for the facilities associated with the diesel stage at the five remaining refineries was completed in December 2013, and construction began in January 2016 and is expected to end in December 2018. Until construction is completed, we plan to import ultra-low sulfur fuels in order to meet domestic demand.

The Open Book Cost Estimation (OBCE) methodology will be used in connection with the implementation of the diesel stage at the refineries other than Cadereyta and will be divided into two stages: (1) the development of detailed engineering plans and the placement of purchase orders for equipment requiring significant delivery time, which was completed with the execution of the Final Works Agreement on December 17, 2015; and (2) the execution of detailed engineering, procurement and construction, which commenced in January 2016 and is expected to be completed in December 2018.

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During 2015, we entered into the following contracts as part of the second phase of our Fuel Quality Project:

<b>Contractors &amp; facilities</b>	<b>Contract date</b>	<b>Original Contract (millions of U.S. dollars)</b>	<b>Startup date</b>	<b>Estimated completion date</b>
Diesel Madero: ICA Fluor S. de R. L. de C.V.:	December 2015	U.S. \$ 737	January 2016	December 2018
For the construction of two hydro-desulfurizer plants, an H2 plant, a sulfur plant and a sour waters plant, and for the modernization of a hydro-desulfurizer plant.				
Diesel Minatitlán: TREUNIDAS México Ingeniería y Construcción S de RL de CV	December 2015	U.S. \$ 567	January 2016	December 2018
For the construction of a hydro-desulfurizer plant, an H2 plant and a sulfur plant, and for the modernization of a hydro-desulfurizer plant.				
Diesel Salamanca: Samsung Ingeniería DUBA SA de CV	December 2015	U.S. \$ 359	January 2016	October 2018
For the construction of a hydro-desulfurizer plant and a sour water plant, and for the modernization of three hydro-desulfurizer plants.				
Diesel Salina Cruz: Northam Engineering SA de CV	December 2015	U.S. \$ 583	January 2016	November 2018
For the construction of an H2 plant, a sulfur plant and a sour waters plant, and for the modernization of four hydro-desulfurizer plants.				
Diesel Tula: AVANZIA Instalaciones S.A de C.V.	December 2015	U.S. \$ 560	January 2016	March 2018
For the construction of an H2 plant and sour waters plant, and for the modernization of five hydro-desulfurizer plants.				

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The following table sets forth, by refinery, the number of new as well as reconfigured units under the Fuel Quality Project diesel phase:

**Fuel Quality Project New and Reconfigured Units**

Processing plants	Refineries						
	Cadereyta	Madero	Minatitlán	Salamanca	Salina Cruz	Tula	Total
New gasoline post-treatment units	1	2	1	1	2	1	8
New diesel plants (HDS)	1	2	1	1	—	—	5
Reconfigured diesel units (HDS)	3	1	1	3	4	5	17
New hydrogen plants	1	1	1	—	1	1	5
New sulfur plants	1	1	1	—	1	—	4
New sour waters plants	1	1	—	1	1	1	5

Source: Pemex Industrial Transformation.

*Reconfiguration of the Miguel Hidalgo Refinery in Tula*

On August 12, 2009, we announced the construction of a new refinery in Tula on land that was donated by the state government of Hidalgo. The new refinery was planned to have a processing capacity of 250 thousand barrels per day of 100% Maya crude oil, which, combined with the processing of 76 thousand barrels per day of vacuum residue generated at the Miguel Hidalgo refinery, would produce 163 thousand barrels per day of gasoline and 117 thousand barrels per day of diesel. However, in June 2013, we announced a change in the scope of the new refinery project, pursuant to which the existing Miguel Hidalgo refinery in Tula would be reconfigured to allow for the processing of vacuum residue on site. In September 2013, ICA Fluor Daniel, S. de R.L. de C.V. was awarded a U.S. \$94.8 million contract to carry out studies and to provide engineering services for the first phase of the reconfiguration project.

Upon completion of our pre-investment studies relating to the new refinery in Tula, we determined that it would be most cost effective to forgo construction of a new refinery and instead direct our investments to the reconfiguration of the existing Miguel Hidalgo refinery. Accordingly, on December 3, 2014, we announced the commencement of renovations to upgrade the refinery as part of the *Aprovechamiento de Residuales en la Refinería de Tula Hidalgo* (Residue Use at the Tula Hidalgo Refinery, which we refer to as the Tula refinery reconfiguration project). The reconfigured refinery will process vacuum residue in order to convert it into high-value fuels and is expected to produce approximately 173 thousand barrels per day of gasoline and 104 thousand barrels per day of diesel. The gasoline and diesel distillates produced at the refinery will meet ultra-low sulfur content specifications and no fuel oil will be produced. The refinery is also expected to have a crude oil processing capacity of 340 thousand barrels per day, of which 35% will be Maya crude oil and 65% will be Isthmus crude oil.

The Tula refinery reconfiguration project, which is scheduled to be completed in 2018, is expected to require a total investment of U.S. \$4.8 billion and generate an internal rate of return of 17.2%. During 2015, we invested a total of U.S.\$ 319.3 million in this project, of which U.S. \$25.0 million was allocated to pre-investment studies and U.S. \$9.8 million to site preparations. When site conditioning works were finished for the reconfigured refinery, the Institute of Administration and Valuation of National Assets' assessment of commercial value increased from U.S. \$66.7 million to U.S. \$378.4 million, a U.S. \$311.7 million increase in asset value as a result of the reconfiguration.

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As of December 31, 2015, the following contracts have been assigned for the reconfiguration of the Tula refinery:

<b>Contractor(s) &amp; Facilities</b>	<b>Contract Date</b>	<b>Contract Amount (in millions of U.S. dollars)</b>	<b>Startup Date</b>	<b>Expected Date of Completion</b>
ICA Fluor Daniel, S. de R.L. de C.V.  For the implementation of our project's first phase and the development of residual utilization project.	September 2013	U.S. \$ 95.18	September 2013	December 2016
Constructora Norberto Odebrecht, S.A.  For site preparation and shaping platforms.	February 2014	U.S. \$ 157.53	February 2014	August 2015 (completed)
Jacobs Consultancy, Inc.  For an opinion evaluating the economic, environmental and technical feasibility of the project.	August 2014	U.S. \$ 0.4	August 2014	December 2016
ICA Fluor Daniel, S. de R.L. de C.V.  For the implementation of phase II of the project to increase refining capacity in connection with the Tula refinery reconfiguration project, complementary engineering, equipment procurement and the construction of a delayed coker unit.	October 2014	U.S. \$1,300.55	October 2014	April 2018
Compañía Mexicana de Exploraciones, S.A. de C.V.  For technical assistance to our refining segment in 2014 and 2015.	November 2014	U.S. \$ 2.38	November 2014	December 2015 (completed)
Universidad Tecnológica de Tamaulipas Norte  For a study on optimizing water usage.	January 2015	U.S. \$ 1.44	January 2015	February 2016 (completed)
Vázquez Nava y Consultores, S.C.  For evaluations of our refining segment's strategy for the project.	March 2015	U.S. \$ 2.11	March 2015	December 2018
Instituto Mexicano del Petróleo  For a study of thermal integration of the hydro-desulfurization gasoline unit No. 1 (U-400-I).	September 2015	U.S. \$ 0.26	September 2015	March 2016
ICA Fluor Daniel, S. de R.L. de C.V.  For the implementation of our project's second phase, for the complementary engineering, construction of the first package of integration works and auxiliary services.	November 2015	U.S. \$1,174.89	November 2015	June 2018
Constructora Norberto Odebrecht, S.A.  For construction of access roads and other external infrastructure.	November 2015	U.S. \$ 131.95	November 2015	April 2017

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**Table of Contents***Reconfiguration of the Salamanca Refinery*

The reconfiguration of the "Ingeniero Antonio M. Amor" refinery in Salamanca, Guanajuato focuses on the conversion of residuals into high-steam distillates (without a need for increased crude oil processing), as well as a new lubricants train to produce group II lubricants. As part of the reconfiguration, we will construct new plants and refurbish existing plants. This project also involves the construction of a perimeter wall surrounding the refinery with two security entrances, the relocation of the Federal Electricity Commission's electric transmission lines, site improvements, as well as the construction of a delayed coker unit, a catalytic cracking unit, a hydrogen plant, a coker naphthas hydro-desulfurization plant, a gasoil hydro-desulfurization plant, a new lubricants train, a naphtha reforming plant, a sulfur recovery unit, an amine regeneration unit and a sour water treatment facility. In addition, this project involves the construction of storage tanks, effluent treatment plants (at which industrial wastewater is treated for reuse) and infrastructure (including roads and street lights) in the areas surrounding the refinery, as well as services, electric power supply, high burner areas, buildings and other service and support facilities. Other units, including certain distillation vacuum units (including the AA, AS and AI units) will undergo renovations designed to efficiently transport residuals to the coker plant for processing and to maximize the conversion of residuals into distillates. Finally, the project includes the integration of pipelines, pumping equipment and electrical substations from existing facilities.

In connection with a public bidding process conducted in accordance with OBCE methodology, on November 24, 2014, we awarded a contract for phase I of the Salamanca refinery reconfiguration project, which provides for the development of the detailed engineering plan and cost estimates. This contract became effective in November 2014, but following an agreement for a term extension, has been suspended as of March 2016. The reconfiguration of the Salamanca refinery is scheduled to be completed in December 2019.

*Tuxpan Pipeline*

This project is intended to help meet the increasing demand for refined products in the metropolitan area of the Mexico Valley. The total cost of the project is Ps. 4,495 million, which includes the construction of a pipeline measuring 18 inches in diameter and 109 kilometers in length, five storage tanks located at the Tuxpan Maritime Terminal with a capacity of 100,000 barrels each and a research study to determine the best option for the discharge of refined products from tankers and pipelines to these storage tanks. ARB Arendal, S. de R.L. de C.V. began construction of the pipeline in June 2009. The pipeline was completed in October 2012 and began operating in November 2012. A consortium formed by Tradeco Infraestructura, Tradeco Industrial, ITECSA and Grupo OLRAM was awarded a contract for the construction of the storage tanks, which began in October 2009. As of the date of this report, three of the project's five tanks are in operation (two of which began operating in 2013 and the other began operating in 2014), one has been completed and is in the process of commissioning and the final tank is expected to be completed during the second half of 2016.

*2016 Refining Capital Expenditures Budget*

For 2016, we have budgeted Ps. 18,918.8 million for capital expenditures in our refining segment. We plan to invest 40.7% of this amount on rehabilitation projects, 31.2% on environmental and industrial safety projects, 8.3% to expand and upgrade refineries and related facilities, 11.9% on the Tula refinery reconfiguration project and 7.4% on other projects and acquisitions.

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*Divestitures*

On October 28, 2015, we announced the divestiture of our 49% ownership interest in Mexicana de Lubricantes, S.A. de C.V. to Impulsora Jalisciense S.A. for Ps. 826.2 million. This sale represents a gain of Ps. 337.7 million on the book value of the investment as of December 31, 2014.

**Gas and Basic Petrochemicals***Natural Gas and Condensates*

Our average natural gas production decreased by 2.0% in 2015, from 6,532 million cubic feet per day in 2014 to 6,401 million cubic feet per day in 2015, while the average wet natural gas processed decreased by 6.2%, from 4,343 million cubic feet per day in 2014 to 4,073 million cubic feet per day in 2015.

All wet natural gas production is directed to our gas processing facilities. At the end of 2015, we owned nine facilities.

The following facilities are located in the Southern region:

- *Nuevo Pemex.* This facility contains 13 plants that together in 2015 produced 886 million cubic feet per day of dry gas, 11 thousand barrels per day of ethane, 25 thousand barrels per day of liquefied gas, 14 thousand barrels per day of naphtha and 91 thousand tons of sulfur.
- *Cactus.* This facility contains 22 plants that together in 2015 produced 784 million cubic feet per day of dry gas, 18 thousand barrels per day of ethane, 22 thousand barrels per day of liquefied gas, 12 thousand barrels per day of naphtha and 270 thousand tons of sulfur.
- *Ciudad Pemex.* This facility contains eight plants that together in 2015 produced 681 million cubic feet per day of dry gas and 170 thousand tons of sulfur.
- *La Venta.* This facility contains one plant that produced 147 million cubic feet of dry gas per day in 2015.
- *Matapionche.* This facility contains five plants that together in 2015 produced 16 million cubic feet per day of dry gas, one thousand barrels per day of liquefied gas, 0.3 thousand barrels per day of naphtha and four thousand tons of sulfur.
- The Morelos, Cangrejera and Pajaritos facilities form the Coatzacoalcos area gas processing complex (which we refer to as a GPC):
  - *Morelos.* This facility contains one plant that in 2015 produced 32 thousand barrels per day of ethane, 39 thousand barrels per day of liquefied gas and 11 thousand barrels per day of naphtha.
  - *Cangrejera.* This facility contains two plants that together in 2015 produced 34 thousand barrels per day of ethane, 43 thousand barrels per day of liquefied gas and 12 thousand barrels per day of naphtha.
  - *Pajaritos.* This facility contains one plant that produced 11 thousand barrels per day of ethane in 2015.

The following facilities are located in the Northern region:

- *Burgos.* This facility contains nine plants that together in 2015 produced 694 million cubic feet per day of dry gas, 15 thousand barrels per day of liquefied gas and 18 thousand barrels per day of naphtha.
- *Poza Rica.* This facility contains five plants that together in 2015 produced 161 million cubic feet per day of dry gas, five thousand barrels per day of liquefied gas, two thousand barrels per day of naphtha and one thousand tons of sulfur.
- *Arenque.* This facility contains three plants that together in 2015 produced 30 million cubic feet per day of dry gas, one thousand barrels per day of a blend of ethane and natural gas liquids and three thousand tons of sulfur.

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The following tables set forth our total natural gas processing and production, as well as processing capacity, for the five years ended December 31, 2015.

### Natural Gas and Condensates Processing and Production<sup>(1)</sup>

	Year ended December 31,					2015 vs. 2014
	2011	2012	2013	2014	2015	
	(in millions of cubic feet per day, except where otherwise indicated)					(%)
<b>Processing</b>						
Wet gas	4,527	4,382	4,404	4,343	4,073	(6.2)
Sour gas	3,445	3,395	3,330	3,356	3,225	(3.9)
Sweet gas <sup>(2)</sup>	1,082	987	1,074	986	847	(14.1)
Condensates <sup>(3)</sup>	57	46	46	49	45	(8.2)
Gas to natural gas liquids extraction	4,483	4,346	4,381	4,303	3,904	(9.3)
Wet gas	4,347	4,206	4,234	4,172	3,745	(10.2)
Reprocessing streams <sup>(4)</sup>	136	140	147	131	159	21.4
<b>Production</b>						
Dry gas <sup>(5)</sup>	3,692	3,628	3,693	3,640	3,398	(6.6)
Natural gas liquids <sup>(6)(7)</sup>	389	365	362	364	327	(10.2)
Liquefied petroleum gas <sup>(6)</sup>	185	176	178	176	150	(14.8)
Ethane <sup>(6)</sup>	121	115	109	110	107	(2.7)
Naphtha <sup>(6)(8)</sup>	82	72	73	77	69	(10.4)
Sulfur <sup>(9)</sup>	636	592	620	603	538	(10.8)

Note: Numbers may not total due to rounding.

(1) Excludes operations of our exploration and production segment, which produced a total of 6,401 million cubic feet of natural gas per day in 2015.

(2) Includes sweet vapor from condensates.

(3) Includes internal streams.

(4) Reprocessing of pipeline dry gas at the Pajaritos cryogenic plant.

(5) Does not include ethane reinjected into the natural gas stream.

(6) In thousands of barrels per day.

(7) Includes stabilized condensates, reprocessing streams from the Cangrejera petrochemical complex and other streams for fractionating.

(8) Includes pentanes.

(9) In thousands of tons.

Source: Pemex BDI.

### Processing Capacity

	Year ended December 31,				
	2011	2012	2013	2014	2015
	(in millions of cubic feet per day, except where otherwise indicated)				
<b>Sweetening plants</b>					
Sour condensates <sup>(1)</sup>	144	144	144	144	144
Sour natural gas <sup>(2)</sup>	4,503	4,503	4,503	4,523	4,523
<b>Natural gas liquids recovery plants</b>					
Cryogenics <sup>(3)</sup>	5,712	5,912	5,912	5,912	5,912
<b>Natural gas liquids fractionating<sup>(1)(4)</sup></b>	569	569	569	569	569
<b>Processing of hydrosulfuric acid</b>	219	219	219	219	219

(1) In thousands of barrels per day.

(2) In 2014, following a review of the sour natural gas processing capacity of the Poza Rica Complex reflecting an increase in capacity from 230 to 250 million cubic feet per day, the total installed sour natural gas processing capacity of the gas and basic petrochemicals segment increased from 4,503 to 4,523 million cubic feet per day.

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- (3) Since December 2011, the cryogenic plant at Cangrejera has been out of service. In October 2011, the capacity of the Nuevo Pemex complex cryogenic plant at the Nuevo Pemex complex was reduced from 1,550 to 1,500 million cubic feet per day. In November 2012, cryogenic plant No. 2 began operations at the Poza Rica GPC, with a capacity of 200 million cubic feet per day.
- (4) The liquids fractionating plant at the Reynosa complex has been out of service since August 31, 2009.

Source: Pemex BDI.

Domestic consumption of dry gas totaled 5,447 million cubic feet per day in 2015, a 4.9% decrease from the 2014 domestic consumption of 5,727 million cubic feet per day. The subsidiary entities consumed approximately 40.4% of the total domestic dry gas consumed in 2015, while the electrical sector consumed 26.9%, the industrial-distributor sector consumed 23.5%, the electrical autogeneration sector consumed 2.9% and the trading sector consumed 6.3%.

We import dry gas to satisfy shortfalls in our production and to meet demand in areas of northern Mexico that, due to their distance from the fields, can be supplied more efficiently by importing natural gas from the United States. In August 2013, we announced a natural gas supply strategy developed in partnership with the Mexican Government to address the domestic natural gas shortages. Under this strategy, we will increase our liquefied natural gas imports in the short term. See “—Business Overview—Gas and Basic Petrochemicals—Natural Gas Supply Strategy” in this Item 4. In 2015, we imported 1,418.4 million cubic feet per day of natural gas, an increase of 4.5% from the 1,357.8 million cubic feet per day imported in 2014, due to lower availability of sour wet natural gas and dry gas from our exploration and production segment’s fields. The total amount of natural gas imported per day in 2015 included 93.9 million cubic feet of liquefied natural gas imported through Manzanillo.

We process sour and sweet condensates from our exploration and production segment in order to obtain stabilized natural gas liquids and also recover liquid hydrocarbons obtained from the processing of sweet natural gas. In addition, we obtain natural gas liquids from internal streams and liquid hydrocarbons condensed in sour wet gas pipelines. Our production of natural gas liquids, including stabilized condensates, reprocessing and other fractionating streams, decreased by 10.0% from 364 thousand barrels per day in 2014 to 327 thousand barrels per day in 2015.

We process sour condensates, which have a higher sulfur content, to produce stabilized sweet condensates. The volume of sour condensates we processed from our exploration and production segment and internal streams of our gas and basic petrochemical segment totaled 31.8 thousand barrels per day in 2015, a 3.9% decrease from the 33.1 thousand barrels per day processed in 2014. We also process sweet condensates at our Burgos facilities to produce light and heavy natural gasoline.

In November 2012, a new cryogenic plant, which has a processing capacity of 200 million cubic feet per day of sweet wet gas, began operating at Poza Rica GPC. This plant was constructed as part of a project that included, among other installations, two liquid gas storage tanks that each have a capacity of 20 thousand barrels.

Upon its enactment in August 2014, the Hydrocarbons Law eliminated the restrictions relating to the petrochemical products that were previously classified as “basic.” Accordingly, as of the date of this report, petrochemicals obtained as raw materials and intended for use in petrochemical industrial processes may be produced by us, any productive state-owned company or public sector entity of the Federal Government or any private sector company in accordance with the terms of the Hydrocarbons Law and the applicable regulatory framework.

#### *Natural Gas Supply Strategy*

On August 13, 2013, we and the Mexican Government presented a strategy to address domestic natural gas shortages in the short-, medium- and long-term. In the short-term, we have increased our liquefied natural gas imports. From the second half of 2014 through the end of 2015, we imported 19 liquefied natural gas vessels in order to meet the domestic natural gas demand. We also switched from using natural gas to using fuel oil at our facilities. Finally, we expect to increase oil and shale gas reserves in order to satisfy domestic demand for natural gas in the long term.



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Over the five years ended December 31, 2015, the value of our domestic sales was distributed as follows:

**Value of Gas and Basic Petrochemical Segments' Domestic Sales<sup>(1)</sup>**

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in millions of pesos) <sup>(2)</sup>					
Natural gas	Ps. 64,466.3	Ps. 50,233.0	Ps. 68,128.7	Ps. 78,666.4	Ps. 53,037.3	(32.6)
Liquefied petroleum gas	57,981.0	64,966.5	71,728.9	78,258.9	78,194.0	(0.1)
Petrochemicals						
Hexane	408.2	4.8	44.3	313.9	211.0	(32.8)
Ethane <sup>(3)</sup>	—	—	32.3	283.6	310.7	9.6
Solvent agents	29.2	85.7	28.0	33.5	0.5	(98.5)
Sulfur	1,354.7	1,167.2	659.6	795.9	926.1	16.4
Carbon black <sup>(4)</sup>	2,368.2	1,115.7	—	—	—	—
Pentanes	232.0	46.9	165.8	197.2	130.7	(33.7)
Heptane	105.7	8.6	62.7	39.1	1.0	(97.4)
Butane	240.7	264.9	259.1	277.5	205.7	(25.9)
Propane	93.5	69.6	70.3	92.4	57.6	(37.7)
Heavy naphtha	—	—	4.4	15.7	191.0	1,116.6
Light naphtha	—	—	—	2.8	39.7	1,317.9
Total Petrochemicals	4,832.3	2,763.4	1,326.5	2,051.6	2,074.0	1.1
Total	Ps. 127,279.6	Ps. 117,962.8	Ps. 141,184.1	Ps. 158,976.9	Ps. 133,305.3	(16.1)

Note: Numbers may not total due to rounding.

(1) Excludes value added tax.

(2) Figures are stated in nominal pesos.

(3) Ethane sales to Petroquímica Mexicana de Vinilo S.A. de C.V. began in October 2013. See “—Business Overview—Petrochemicals—Joint Venture with Mexichem” in this Item 4.

(4) Since May 2012, carbon black is sold by our refining segment.

Source: Pemex BDI.

The volume of our domestic sales of gas and basic petrochemicals for the five-year period ended December 31, 2015 was distributed as follows:

**Volume of Gas and Basic Petrochemical Segments' Domestic Sales**

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in thousands of barrels per day, except where otherwise indicated)					
Natural gas <sup>(1)</sup>	3,382.7	3,387.7	3,463.5	3,451.2	3,246.6	(5.9)
Liquefied petroleum gas <sup>(2)</sup>	284.8	285.5	282.8	280.9	277.4	(1.2)
Petrochemicals <sup>(3)</sup>						
Hexane	29.3	0.3	2.9	24.7	19.0	(23.1)
Ethane <sup>(4)</sup>	—	—	16.7	119.1	183.0	53.7
Solvent agents	2.7	7.2	2.1	2.2	0.0	(100.0)
Sulfur	647.8	649.1	520.7	655.3	572.7	(12.6)
Carbon black <sup>(5)</sup>	429.6	167.1	—	—	—	—
Pentanes	19.1	3.9	14.6	18.3	18.9	3.3
Heptane	7.1	0.5	3.9	3.0	0.1	(96.7)
Butane	20.6	23.0	26.4	29.2	33.2	13.7
Propane	8.7	8.2	9.3	9.7	10.1	4.1
Heavy naphtha	—	—	0.4	1.5	29.9	1,893.3
Light naphtha	—	—	—	0.3	6.2	1,966.7
Total petrochemicals	1,164.9	859.2	597.0	863.2	873.0	1.1

Note: Numbers may not total due to rounding.

(1) In millions of cubic feet per day.

(2) In thousands of barrels per day.

(3) In thousands of tons.

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(4) Ethane sales to Petroquímica Mexicana de Vinilo S.A. de C.V. began in October 2013. See “—Business Overview—Petrochemicals—Joint Venture with Mexichem” in this Item 4.

(5) Since May 2012, carbon black is sold by our refining business segment.

Source: Pemex BDI.

In 2015, the value of our domestic sales decreased by 16.1%, as compared to 2014, to Ps. 133,305.1 million, primarily as a result of a 32.6% decrease in domestic sales of natural gas and a 0.1% decrease in domestic sales of LPG, each due to price decreases. Our total sales of petrochemicals increased by 1.1% in 2015, primarily due to increased sales of sulfur, heavy naphtha and ethane.

### Subsidiaries of Pemex Industrial Transformation

Pemex Industrial Transformation, which acquired, among other things, the assets of Pemex-Gas and Basic Petrochemicals as part of our recent corporate reorganization, conducts certain management, real estate and distribution activities through its subsidiaries and through certain joint ventures. The following table lists its subsidiaries, their principal operating activities and Pemex Industrial Transformation’s ownership interest as of December 31, 2015.

#### Subsidiaries of Pemex Industrial Transformation<sup>(1)</sup>

<u>Subsidiary</u>	<u>Principal Activity</u>	<u>Ownership Interest (%)</u>
Mex Gas Internacional, S.L. <sup>(2)</sup>	Holding company	100.0
Pasco International, Ltd.	Holding company	100.0
Terrenos para Industrias, S.A.	Real estate holding company	100.0

(1) As of December 31, 2015.

(2) Mex Gas Internacional, S.L. is the only subsidiary of Pemex Industrial Transformation that is a consolidated subsidiary company. See Note 4 to our consolidated financial statements included herein.

Source: Pemex Industrial Transformation.

The following table lists Pemex Industrial Transformation’s joint venture, its principal operating activities and Pemex Industrial Transformation’s ownership interest as of December 31, 2015.

#### Joint Ventures of Pemex Industrial Transformation<sup>(1)</sup>

<u>Subsidiary</u>	<u>Principal Activity</u>	<u>Ownership Interest (%)</u>
Gasoductos de Chihuahua, S. de R.L. de C.V.	Gas transportation	50.00
CH4 Energía, S.A. de C.V.	Gas trading	50.00

(1) As of December 31, 2015.

Source: Pemex Industrial Transformation.

### Divestitures

On July 31, 2015, we announced the divestiture of our 50% ownership interest in the Gasoductos de Chihuahua, S. de R.L. de C.V. (Gasoductos de Chihuahua) joint venture with Infraestructura Energética Nova, S.A.B. de C.V. (IEnova). IEnova shareholders approved the transaction in September 2015.

On December 18, 2015, Mexico’s *Comisión Federal de Competencia Económica* (Federal Economic Competition Commission, or COFECE) announced that it rejected the proposed direct sale to IEnova as it was structured. While COFECE’s ruling does not object to IEnova’s proposed acquisition of our interest in Gasoductos de Chihuahua, it requires that we offer two of the seven assets involved in the transaction, Gasoducto San Fernando and LPG Ducto TDF, through a competitive bidding process.

As a result, we and IEnova are in the process of restructuring the transaction in order to (1) allow us to carry out a competitive bidding process with respect to Gasoducto San Fernando and LPG Ducto TDF and satisfy the other requirements established by COFECE’s ruling and (2) allow IEnova to acquire our interest in Gasoductos de Chihuahua, excluding the aforementioned assets. We expect to restructure the transaction and meet the conditions set by the COFECE during 2016.

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***Pipelines***

***Private Sector Participation in Natural Gas Distribution***

Prior to the enactment of the Hydrocarbons Law, the Regulatory Law provided that private and “social sector” companies could, with governmental authorization, store, distribute and transport natural gas, and may construct, own and operate natural gas pipelines, facilities and equipment.

Since 1997, the Regulatory Law has required us to provide the private sector with open access to our transportation system for distribution, ending our prior exclusive rights over the distribution lines. We continue to market natural gas and may develop natural gas storage systems.

In 1996, the Energy Regulatory Commission approved the Gradual Access Program for 1996 to 1997, which required that we open access to our natural gas distribution system to the private sector and prohibited vertical integration between transportation and distribution. As a result, Pemex-Gas and Basic Petrochemicals’ distribution assets located within the following official distribution zones were privatized: Chihuahua, Toluca, Saltillo, Nuevo Laredo, Río Pánuco, Northern Tamaulipas, Distrito Federal, Valle de Cuautitlán-Texcoco-Hidalgo, Hermosillo, Monterrey, Mexicali, El Bajío, Cananea, Querétaro, La Laguna, Bajío Norte, Puebla, Tlaxcala, Guadalajara, Piedras Negras and Ciudad Juárez. Most recently, Pemex-Gas and Basic Petrochemicals’ distribution assets located within Altamira and Morelos were privatized in 2012 and the distribution assets located within Veracruz were privatized in 2013.

In addition, with respect to first-hand sales of natural gas, Pemex-Gas and Basic Petrochemicals submitted to the Energy Regulatory Commission its proposal for a new payment system in 2013, which would provide customers with the option to reserve transportation capacity of natural gas and make payments based on the volume consumed. This new payment system is designed to allow customers to better estimate their consumption of natural gas, as well as enhance our ability to manage costs and capacity related to the transportation of natural gas. We are prepared to begin operating under this new system once the Energy Regulatory Commission approves it and issues final regulations to govern natural gas sales under the system. This new system is expected to be implemented in 2016.

The Hydrocarbons Law, which repealed the Regulatory Law, provides for the participation of other companies in the entire natural gas value chain. The law additionally establishes a permit regime that governs all midstream and downstream activities in Mexico. See “—History and Development—Recent Energy Reform” above in this Item 4. In January 2015, the Energy Regulatory Commission granted Gasoducto de Aguaprieta S. de R.L. de C.V. a transportation permit corresponding to the northwestern region of Mexico, including Cajeme and Navojoa in the state of Sonora and another for Ahome, Choix, El Fuerte, Guasave and Salvador Alvarado in the state of Sinaloa.

Pursuant to the Hydrocarbons Law, on August 11, 2014, CENAGAS was created as a decentralized public entity of the Mexican Government to act as the independent administrator of the Integrated Natural Gas System. This system interconnects the infrastructure for the storage and transportation of natural gas across the nation, with the aim of expanding coverage, strengthening security measures and improving the continuity, quality and efficiency in transportation service. As an integrated system of transportation systems owned by CENAGAS or other participating companies, the Integrated Natural Gas System functions as a primary transportation service supplier in Mexico with standardized fares. Within this system, the *Sistema Nacional de Gasoductos* (National Gas Pipelines System) acts as the commercial administrator for the total available capacity of the Integrated Natural Gas System. In order for a transportation system to become part of the Integrated Natural Gas System, its transport capacity must enhance the Integrated Natural Gas System’s flow capacity and improve the overall transportation service provided to users. See “—History and Development—Recent Energy Reform” above in this Item 4 for more information.

In accordance with the Energy Reform Decree, we signed a transfer agreement with CENAGAS on October 29, 2015 for the transfer to CENAGAS of assets associated with the Integrated Natural Gas System and the distribution contract for the Naco-Hermosillo pipeline system. The National Gas Pipeline System has 87 pipelines with a total length of almost 9,000 kilometers and a transport capacity over 5,000 million cubic feet per day, while the Naco-Hermosillo system is a 300 kilometers long pipeline with a transport capacity of 90 million cubic feet per day.

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The approximate aggregate book value of these assets, which were transferred to CENAGAS on January 1, 2016, was Ps. 33.2 billion as of December 31, 2015, as described in Note 9 to our consolidated financial statements.

### *Los Ramones Gas Pipeline*

The Los Ramones pipeline project, which is being implemented in two phases, is part of a strategy to supply central Mexico with natural gas imported from the United States. Phase one of the project is further subdivided into two stages. The first stage of phase one, which consisted of the construction of a pipeline running from Agua Dulce, Texas to Los Ramones, Nuevo León that is 48 inches in diameter, 116.4 kilometers in length and has a transport capacity of 1.0 billion cubic feet per day, began operating after its completion on December 1, 2014. The second stage of phase one, which consists of the construction of two compression stations, is expected to increase the transport capacity of the pipeline to 2.1 billion cubic feet per day. Construction of the compression stations was completed in December 2015, and both are ready to begin operations after successfully testing their compression equipment. The total investment for the construction of the pipeline during the first stage of phase one and the two compression stations during the second stage of phase one of this project is approximately U.S. \$587.0 million.

Phase two of this project, which consists of the construction of a pipeline running from Los Ramones, Nuevo León to Apaseo el Alto, Guanajuato, is further subdivided into two stages: Ramones Norte and Ramones Sur. TAG Pipelines, S. de R.L. de C.V. (an indirect subsidiary of Pemex Industrial Transformation, which we refer to as TAG Pipelines) is developing the project through partnerships for each of these stages.

On September 11, 2014, we announced the commencement of phase two of the Los Ramones pipeline project, which consists of the construction of a pipeline that is expected to have a capacity of 1.4 billion cubic feet per day of natural gas. The phase two natural gas pipeline will measure approximately 743 kilometers in length and 42 inches in diameter, and will run from northern to central Mexico through the states of Nuevo León, Tamaulipas, San Luis Potosí, Querétaro and Guanajuato. Phase two of the project is expected to require a total investment of approximately U.S. \$2,508 million and to begin operating in 2016. The northern portion of the pipeline, Ramones Norte, will measure approximately 452 kilometers in length and will run from Los Ramones, Nuevo León to San Luis Potosí, San Luis Potosí. Ramones Norte is expected to require an estimated U.S. \$1,563 million investment. The southern portion of the pipeline, Ramones Sur, will measure approximately 291 kilometers in length and will run from San Luis Potosí, San Luis Potosí to Apaseo el Alto, Guanajuato. Ramones Sur is expected to require an estimated U.S. \$945 million investment.

On March 26, 2015, we announced an agreement among PMI, the U.S.-based global asset manager BlackRock Inc. (which we refer to as BlackRock) and the private equity firm First Reserve Corp. (which we refer to as First Reserve), pursuant to which BlackRock and First Reserve acquired a joint interest in phase two of the Los Ramones pipeline project worth approximately U.S. \$900 million. Through their investment, BlackRock and First Reserve became beneficiaries of a 25-year transportation services agreement. This joint interest holds approximately 45% of the equity interest in the phase two natural gas pipeline.

Pursuant to the permit regime established by the Hydrocarbons Law, TAG Pipelines Norte, S. de R.L. de C.V. (an indirect subsidiary of Pemex Industrial Transformation, which we refer to as TAG Norte) and TAG Pipelines Sur, S. de R.L. de C.V. (a special purpose vehicle created by P.M.I. Holdings, B.V., TAG Pipelines and México Power and Gas Ventures, B.V., which we refer to as TAG Sur) obtained a construction permit from the Energy Regulatory Commission and final approval from COFECE before beginning construction.

As of the date of this report, the following actions have been taken with respect to the Ramones Norte portion of the pipeline project:

- *Energy Regulatory Commission Permit:* In June 2014, the Energy Regulatory Commission issued Resolution RES-238-2014, which granted TAG Pipelines transportation permit number G/335/TRA/2014.

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- *COFECE Approval:* On July 18, 2014, TAG Pipelines requested COFECE's approval of the transportation permit granted by the Energy Regulatory Commission. In October 2014, COFECE approved TAG Pipelines' transportation permit number G/355/TRA/2014.
- *Energy Regulatory Commission Approval:* On December 4, 2014, the Energy Regulatory Commission issued Resolution RES-586-2014, which approved the modification of transportation permit number G/335/TRA/2014 and authorized TAG Pipelines to transfer its transportation permit to TAG Norte. On December 18, 2014, the Energy Regulatory Commission approved the incorporation of TAG Norte's transportation system into the Integrated Natural Gas System. For more information about the Integrated Natural Gas System, see "—History and Development—Recent Energy Reform" above in this Item 4.
- *Project Financing:* After PMI, TAG Pipelines and Ductos Energéticos del Norte, S. de R.L. de C.V. (a subsidiary of Gasoductos de Chihuahua, S. de R.L. de C.V.) entered into a business partnership agreement and created TAG Pipelines Norte as a special purpose vehicle for the Ramones Norte project, Banco Santander was designated as the financial agent responsible for obtaining the financial resources for the project. On December 23, 2014, TAG Norte received the first cash disbursement under the financing agreements.
- *Rights of Way:* By the end of July 2015, 100% of the rights of way necessary for this project had been acquired and all in-route building consents had been obtained.
- *Construction:* As of the end of December 2015, the excavation, pipeline laying, welding, lowering and covering were completed; a hydrostatic test was performed on the entire pipeline; the pipeline was inerted with nitrogen; and the natural gas packing process commenced.

As of the date of this report, the following actions have been taken with respect to the Ramones Sur portion of the pipeline project:

- *Energy Regulatory Commission Permit:* In July 2014, the Energy Regulatory Commission published resolution RES-351-2014, which granted TAG Sur transportation permit number G/340/TRA/2014.
- *COFECE Approval:* On April 4, 2014, COFECE approved TAG Sur's transportation permit number G/340/TRA/2014.
- *Energy Regulatory Commission Approval:* On December 18, 2014, the Energy Regulatory Commission issued Resolution RES-623-2014, which approved the incorporation of TAG Sur's transportation system into the Integrated Natural Gas System.
- *Project Financing:* After PMI, TAG Pipelines and Mexico Power and Gas Ventures B.V. entered into a business partnership agreement and created TAG Pipelines Sur as a special purpose vehicle for the Ramones Sur project, an international consortium of lenders and Mexico's development banks entered into financing agreements on December 11, 2014, thereby securing financing for this project. On December 26, 2014 TAG Sur received the first cash disbursement under the financing agreements.
- *Rights of Way:* By the end of July 2015, 100% of the rights of way necessary for this project had been acquired and all in-route building consents had been obtained.
- *Construction:* As of December 31, 2015, the excavation, pipeline laying, welding, lowering and covering were completed; a hydrostatic test was performed on the entire pipeline; the pipeline was inerted with nitrogen and a connection with the natural pipeline gas system in La Pila, San Luis de la Paz, Querétaro Industrial Park and Apaseo el Alto were completed.

We expect to commence commercial operations for this pipeline project (both the Ramones Norte and Ramones Sur portions) in June 2016.

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### *Pricing Decrees*

The recent energy reform provides for fuel price liberalization beginning January 2018. At that time, subsidies will either be eliminated altogether or targeted to low income groups. Our sales will continue to be regulated by the Energy Regulatory Commission until COFECE determines that there is effective competition in the wholesale market.

The Mexican Government currently determines natural gas prices for domestic sales, which are calculated in accordance with directives issued by the Energy Regulatory Commission on July 20, 2009 and the related Resolutions of December 20, 2010, March 3, 2011, December 20, 2012, January 17, 2013, March 21, 2013 and December 3, 2013, when the Energy Regulatory Commission approved and issued a temporary methodology for determining the maximum prices of natural gas of first-hand sales. On February 15, 2016, the Energy Regulatory Commission issued a new methodology which, effective March 1, 2016, determines the maximum first-hand sales price of natural gas. These prices aim to reflect natural gas opportunity costs and competitive conditions in international markets and at the point of sale.

Since 2003, price control mechanisms for LPG have been implemented through governmental decrees. In January 2010, the Mexican Government issued a decree establishing the maximum weighted average end-user price of LPG before taxes of Ps. 8.08 per kilogram. Subsequently, as of February 2010, the Mexican Government established monthly maximum price increases in cents per kilogram before taxes, as follows:

<u>Period</u>	<u>Mexican Cents per Kilogram</u>
February 2010 to July 2011	5
August to November 2011	7
December 2011	8
January 2012 to October 2013	7
November to December 2013	9
January to December 2014	9*
January 2015	23*
January 2016	34**

\* On January 1, 2014 and 2015, pursuant to the IEPS Tax on Fossil Fuels, a price increase of 12 and 13 Mexican cents per kilogram, respectively, went into effect in addition to the monthly price increase of nine Mexican cents per kilogram in 2014 and ten Mexican cents per kilogram in 2015; this resulted in a total increase of 23 Mexican cents per kilogram in 2015. The ten Mexican cent per kilogram increase in January 2015 was a one-time increase for the year, and no further monthly increases were established for the remainder of 2015.

\*\* The 34 Mexican cent per kilogram increase in January 2016 was a one-time increase for the year, and no further monthly increases were established for the remainder of 2016.

Beginning in August 2014, the methodology for calculating end-user price was modified from weighted average prices to simple average prices.

On January 1, 2016, the Mexican Government issued a decree establishing a one-time price increase of 34 Mexican cents per kilogram. An additional IEPS Tax on Fossil Fuels of 13 Mexican cents per kilogram was also in effect until February 29, 2016, at which point the Mexican Government's elimination of periodic price increases went into effect.

The Mexican Government could modify these price controls or impose additional price controls in the future. See "Item 3—Key Information—Risk Factors—Risk Factors Related to our Relationship with the Mexican Government—The Mexican Government has imposed price controls in the domestic market on our products."

### *Natural Gas Hedging Operations*

We offer, as a value-added service, various hedging contracts to our domestic customers to protect them against fluctuations in the prices of natural gas. For information on hedging contracts offered to natural gas domestic customers, see "Item 11—Quantitative and Qualitative Disclosures about Market Risk."

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### *2015 Investments and 2016 Capital Expenditures Budget for Gas and Basic Petrochemicals*

In nominal peso terms, we invested Ps. 5,160 million in 2015 in projects primarily related to natural gas and condensates processing. In 2016, our budget for capital expenditures is Ps. 2,093 million, including Ps. 384 million to modernize transportation areas of gas processing complexes; Ps. 301 million to modernize the measuring, control and security systems of gas processing complexes; Ps. 233.0 million to modernize and rehabilitate the water supply and water treatment system facilities at the Nuevo Pemex gas processing complex; and Ps. 364.0 million for the conditioning of the infrastructure used to supply ethane to the Etileno XXI project. The remaining Ps. 811.0 million will be used to ensure the safe and reliable operation of our facilities.

### *Ethane Supply Contract*

On February 19, 2010, we entered into a contract to supply 66,000 barrels per day of ethane to the Etileno XXI project, a petrochemical complex in Nanchital, Veracruz that will produce ethylene and polyethylene. The Etileno XXI project is being developed and will be owned and operated by Braskem-IDESIA, a Brazilian-Mexican consortium. In order to meet the obligations of this contract, we made adjustments to the infrastructure of our processing plants in the Ciudad Pemex, Nuevo Pemex and Cactus GPCs. Additional ethane will be transported from the GPCs located in Tabasco, in southeastern Mexico, to Coatzacoalcos, Veracruz. This contract provides for “take or pay—delivery or pay” obligations for the parties, and thus, in case of breach of our supply obligation, we are subject to the payment of liquidated damages. In the event of termination as a consequence of our material default under the ethane supply contract, we may be obligated to pay to the other parties involved in the project an amount equal to the termination value of this project (the value of which is determined pursuant to the contract and takes into consideration, among other factors, the outstanding debt of the project and the amount invested in the project at such time).

As of December 31, 2015, renovations of our processing plants in the Coatzacoalcos area, Ciudad Pemex, Nuevo Pemex and Cactus GPCs were 98.4% physically completed and 88.3% financially obtained. The renovations are expected to be completed during the second quarter of 2016. In addition, the construction of the pipeline to transport ethane from the GPCs located in Tabasco, in Southeastern Mexico, to Coatzacoalcos, Veracruz was 99.6% physically completed and 99.4% financially obtained. The pipeline will begin operating in three phases: (1) Segment I (Cangrejera petrochemical complex) began operating in January 2015; (2) Segment II (Nuevo Pemex-Cactus-Coatzacoalcos) began operating in July 2015 and the pipeline was packed as of November 3, 2015, and (3) Segment III (Ciudad Pemex-Nuevo Pemex) began operating in December 2015 and is ready to transport C<sub>2</sub>+ from the Ciudad Pemex GPC to the Nuevo Pemex GPC once the Cryogenic 2 in Ciudad Pemex is completed, which it is estimated to take place in the second quarter of 2016.

## **Petrochemicals**

Due to our recent corporate reorganization, certain business units and assets that were operated by our petrochemicals segment were transferred to our ethylene and fertilizers segments upon the formation of Pemex Ethylene and Pemex Fertilizers on August 1, 2015. For the year ended December 31, 2015, we have not presented separately all of the operating results of our ethylene and fertilizers segments in this Item 4, and, accordingly, the results of our petrochemicals segment include the results of these segments for this period. Operating results for these segments will be presented separately for periods beginning January 1, 2016. For more information on our corporate restructuring and our new operating segments, see “—History and Development—Corporate Reorganization.” For a detailed description of the financial results of each segment, see our consolidated financial statements included herein.

### *Capacity*

At the end of 2015, we owned seven petrochemical complexes, four of which are in operation, for the production of petrochemical products (primarily those classified as “non-basic” prior to the enactment of the Hydrocarbons Law). We had a total installed capacity of 9,132 thousand tons of petrochemical products per year in 2015.

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The total production capacity of our operating plants for the last five years was distributed among our facilities as set forth below.

**Petrochemicals Segment's Total Capacity**

<b><u>Petrochemical Facility</u></b>	<b><u>Year ended December 31,</u></b>				
	<b><u>2011</u></b>	<b><u>2012</u></b>	<b><u>2013</u></b>	<b><u>2014<sup>(1)</sup></u></b>	<b><u>2015</u></b>
	<b>(in thousands of tons)</b>				
Cosoleacaque	2,150	2,150	3,225	3,225	3,225
Cangrejera	4,328	4,328	3,964	3,465	3,465
Morelos	2,286	2,286	2,263	2,260	2,260
Pajaritos <sup>(2)</sup>	1,180	1,180	547	—	—
Escolín <sup>(3)</sup>	55	55	—	—	—
Camargo <sup>(4)</sup>	—	—	—	—	—
Independencia	222	222	187	183	183
Tula <sup>(3)</sup>	55	55	—	—	—
<b>Total</b>	<b><u>10,276</u></b>	<b><u>10,276</u></b>	<b><u>10,186</u></b>	<b><u>9,132</u></b>	<b><u>9,132</u></b>

Note: Numbers may not total due to rounding.

(1) As of 2013, our petrochemicals segment's capacity does not include subproducts for our own consumption.

(2) As of September 12, 2013, the vinyl chloride and ethylene plants at the Pajaritos petrochemical complex were divested from Pemex-Petrochemicals to become part of Petroquímica Mexicana de Vinilo S.A. de C.V.

(3) As of 2013, the Escolín and Tula petrochemical complexes' capacities are no longer included because these complexes have been out of operation for approximately three years.

(4) The plant in Camargo ceased operations in 2002.

Source: Pemex Industrial Transformation, Pemex Ethylene and Pemex Fertilizers.

*Production*

Our petrochemicals segment manufactures various petrochemical products, including:

- methane derivatives, such as methanol;
- aromatics and their derivatives, such as high octane hydrocarbon, styrene, benzene, toluene and xylenes;
- propylene chain and its derivatives, such as acrylonitrile and propylene;
- other products, such as oxygen, nitrogen, hexane, heptane, pyrolysis liquids, specialty petrochemical products; and
- petroleum derivatives chain, such as octane base gasoline, amorphous gasoline, naphtha gas and heavy naphtha.

Our ethylene segment manufactures the following petrochemical products:

- ethane derivatives, such as ethylene, polyethylene, ethylene oxide and glycols;
- propylene chain and its derivatives, such as acrylonitrile and propylene.

Our fertilizers segment manufactures:

- ammonia; and
- carbon dioxide.

Our total annual production of petrochemicals in 2015 was 9,887 thousand tons which represents a 12.6% decrease from the production of 11,319 thousand tons in 2014. Of this amount, our petrochemicals segment produced 6,041 thousand tons, representing a decrease of 16.5% from the 7,238 thousand tons produced in 2014. The remainder of these petrochemical products were produced by our refining and gas and basic petrochemicals segments as basic petrochemicals. The decrease in petrochemical production was primarily due to lower production of ammonia and carbonic anhydride at the Cosoleacaque petrochemical complex and a reduced supply of gas following an explosion that occurred at the Abkatún-A Permanente platform on April 1, 2015.



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For information on our gas and basic petrochemicals segments' petrochemical production, see “—Gas and Basic Petrochemicals” above.

The following table summarizes the annual production associated with our principal petrochemical activities for the five years ended December 31, 2015.

**Petrochemicals Segment's Production**

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in thousands of tons per year)					
<b>Liquids</b>						
Hexanes	45	5	22	37	31	(16.2)
Heptanes	19	3	8	5	0	(100.0)
Total	64	8	30	42	31	(26.1)
<b>Other inputs</b>						
Oxygen	447	418	434	441	446	1.1
Nitrogen	165	164	172	176	188	6.8
Hydrogen	128	20	61	87	94	8.0
Total	740	602	667	704	729	3.6
<b>Petrochemicals</b>						
Methane derivatives	2,306	2,473	2,460	2,362	1,682	(28.8)
Ethane derivatives	2,750	2,775	2,473	2,089	1,993	(4.6)
Aromatics and derivatives	923	166	799	1,017	1,022	0.5
Propylene and derivatives	62	49	52	65	66	1.5
Petroleum derivatives	451	26	321	225	31	(86.2)
Others	744	115	443	734	487	(33.7)
Total	7,237	5,604	6,549	6,492	5,281	(18.7)
<b>Other products<sup>(1)</sup></b>						
Hydrochloric acid	98	108	63	—	—	—
Muriatic acid	16	45	30	—	—	—
Total	114	153	93	—	—	—
<b>Total<sup>(2)</sup></b>	<u>8,155</u>	<u>6,367</u>	<u>7,339</u>	<u>7,238</u>	<u>6,041</u>	<u>(16.5)</u>

Note: Numbers may not total due to rounding.

(1) As of September 2013, these products are no longer included due to their divestment from Pemex-Petrochemicals to become part of Petroquímica Mexicana de Vinilo S.A. de C.V. See “—Joint Venture with Mexichem” below in this Item 4.

(2) Figures include petrochemical products used as raw materials to produce other petrochemicals.

Source: Pemex BDI.

*Investments in Petrochemicals*

Our petrochemicals segment invested Ps. 494 million on capital expenditures in 2015, which was allocated among the following ongoing projects as follows:

- Ps. 110.8 million towards infrastructure for maintenance and industrial services areas;
- Ps. 102.5 million to improve the efficiency in storage and distribution in the Topolobampo and Guaymas storage and distribution terminals;
- Ps. 52.1 million to maintain production capacity of feedstock conditioning at the Cangrejera petrochemical complex;
- Ps. 47.7 million to maintain the styrene-ethylbenzene plant;

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- Ps. 28.6 million to modernize and expand the production capacity of the aromatics train (first phase) at the Cangrejera petrochemical complex, which involves the use of new technology, such as a continuous catalytic regeneration reactor; and
- Ps. 153.8 million for other sustainability, safety, modernization, optimization and infrastructure projects.

### 2016 Petrochemicals Capital Expenditures Budget

Our petrochemical segment's 2016 budget includes Ps. 357 million in capital expenditures, which was allocated among the following ongoing projects as follows:

- Ps. 153.0 million to maintain the production capacity of the feed stock conditioning II project at the Cangrejera petrochemical complex;
- Ps. 85.2 million to improve the efficiency in storage and distribution I in the Topolobampo and Guaymas storage and distribution terminals;
- Ps. 13.0 million to maintain the styrene-ethylbenzene plant at the Cangrejera petrochemical complex;
- Ps. 13.0 million for infrastructure for maintenance areas and industrial services for the petrochemical complexes; and
- Ps. 93.0 million for other sustainability, safety, modernization, optimization and infrastructure projects.

### Domestic Sales of Petrochemicals

In 2015, the value of our domestic sales of petrochemicals decreased by 9.2%, from Ps. 28,293.6 million in 2014 to Ps. 25,691.5 million in 2015. This decrease was primarily due to a decrease in the production of ammonia, high density polyethylene, low density polyethylene, and decreases of approximately 24.3% and 25.5% in the prices of styrene and acrylonitrile, respectively, in 2015 as compared to 2014. These results were offset by higher sales of linear low density polyethylene and a 19.6% increase in sales of ethylene oxide due to a 13.5% increase in prices as compared to 2014.

Over the five years ended December 31, 2015, the value of our domestic sales of petrochemicals was distributed as set forth in the table below.

### Value of Petrochemicals Segment's Domestic Sales<sup>(1)</sup>

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in millions of pesos) <sup>(2)</sup>					
<b>Petrochemical Product</b>						
Ethane and derivatives	Ps. 16,539.6	Ps. 16,945.1	Ps. 15,566.0	Ps. 16,208.4	Ps. 15,649.1	(3.5)
Aromatics and derivatives	4,387.0	2,979.4	3,641.4	4,427.5	3,479.4	(21.4)
Methane and derivatives	5,956.0	6,562.6	6,059.9	5,964.0	5,290.3	(11.3)
Propylene and derivatives	1,467.1	1,134.8	1,212.1	1,602.6	1,156.5	(27.8)
Others <sup>(3)</sup>	503.9	139.1	45.9	91.4	116.2	27.1
<b>Total</b>	<b>Ps. 28,853.7</b>	<b>Ps. 27,761.0</b>	<b>Ps. 26,525.3</b>	<b>Ps. 28,293.8</b>	<b>Ps. 25,691.5</b>	<b>(9.2)</b>

Note: Numbers may not total due to rounding.

(1) Excludes value added tax.

(2) Figures are stated in nominal pesos.

(3) Includes naphtha gas.

Source: Pemex BDI.

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*Joint Venture with Mexichem*

In September 2013, Pemex-Petrochemicals entered into a joint venture with Mexichem S.A.B. de C.V., which we refer to as Mexichem, through an investment in Petroquímica Mexicana de Vinilo S.A. de C.V. (PMV), a Mexican entity incorporated by Mexichem in 2011. In connection with this joint venture, we increased our investment in PPQ Cadena Productiva, S.L. by Ps. 2,993.5 million, which allowed this subsidiary company to acquire a 44.09% interest in PMV, and the ethylene and vinyl chloride monomer plants and related infrastructure at the Pajaritos petrochemical complex were divested from Pemex-Petrochemicals and contributed to PMV. This contribution, together with Mexichem's contribution of its chlorine-caustic soda plant, allowed for the integration of the caustic soda-salt-chlorine-ethylene-vinyl chloride monomer production chain, which has streamlined operations and is expected to reduce manufacturing costs. Plants associated with this project began operating on September 12, 2013. The ethylene and vinyl chloride monomer plants are operated by employees of Pemex-Petrochemicals who are compensated by PMV, while the chlorine-caustic soda plant is directly operated by employees of PMV. In October 2013, Pemex-Gas and Basic Petrochemicals began supplying ethane to PMV pursuant to a long-term supply contract approved by the Energy Regulatory Commission. During 2015, our petrochemicals segment supplied 8.8 thousand barrels per day of ethane to PMV, an increase of 51.4% as compared to 5.8 thousand barrels per day in 2014.

*Fertilizer Production*

During 2015, our production of ammonia decreased by 35.0% from 845.5 tons in 2014 to 549.6 tons in 2015 due to a reduction in the supply of natural gas and operating problems.

On January 16, 2014, our subsidiary company P.M.I. Norteamérica, S.A. de C.V. signed an agreement through one of its subsidiaries to purchase the existing assets of Agro Nitrogenados, S.A. de C.V., a subsidiary of Minera del Norte, S.A. de C.V., including a closed fertilizer production facility located in Pajaritos, Veracruz, Mexico, for the purchase price of U.S. \$275 million, which was subsequently lowered to \$273 million. As of March 31, 2016, we have completed our mechanical integrity assessment, assembled purchase orders for necessary equipment, and begun entering into renovation contracts. The renovation of the facility will involve restoring operations of our rotating, static and mechanical equipment, building a carbon dioxide compressor station, as well as other ancillary projects. We expect to begin production in the first quarter of 2017 and to have an annual production capacity of up to 990,000 tons of urea.

**Ethylene**

Our ethylene segment operates through the productive state-owned subsidiary Pemex Ethylene, which was created effective August 1, 2015, and assumes the ethylene line of business from Pemex-Petrochemicals in order to take advantage of the integration of the ethylene production chain.

As described above, for the year ended December 31, 2015, we have presented operating results for our ethylene segment together with results for our petrochemicals and fertilizers segments. Therefore, to review results for this segment, please see “—Business Overview—Overview by Business Segment—Petrochemicals” above in this Item 4. Operating results for these segments will be presented separately for periods beginning January 1, 2016. For more information on our corporate restructuring and our new operating segments, see “—History and Development—Corporate Reorganization.” For a detailed description of the financial results of each segment, see our consolidated financial statements included herein.

*Investments in Ethylene*

Our ethylene segment invested Ps. 1,869 million on capital expenditures in 2015, which was allocated among the following ongoing projects:

- Ps. 402.4 million to expand and modernize the ethane derivatives chain project at the Morelos petrochemical complex in order to gradually increase production of ethylene oxide from 225 thousand tons per year to 360 thousand tons per year;

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- Ps. 276.6 million to modernize and optimize the infrastructure and auxiliary services project at the Cangrejera petrochemical complex;
- Ps. 113.5 million for safety and environmental protection at the Morelos petrochemical complex;
- Ps. 112.3 million to maintain the production capacity of the low density polyethylene plant at the Cangrejera petrochemical complex;
- Ps. 102.2 million to modernize the fire protection network at the Cangrejera petrochemical complex;
- Ps. 93.5 million to maintain the production capacity of the ethylene plant at the Morelos petrochemical complex;
- Ps. 87.1 million to maintain the production capacity of the ethane derivatives chain II at the Morelos petrochemical complex;
- Ps. 77.6 million to maintain the production capacity of auxiliary services II at the Cangrejera petrochemical complex;
- Ps. 59.1 million to maintain the production capacity of auxiliary services III at the Cangrejera petrochemical complex;
- Ps. 54.2 million to maintain the production capacity of ethane derivatives III at the Morelos petrochemical complex;
- Ps. 48.0 million to maintain the production capacity of auxiliary services at the Morelos petrochemical complex;
- Ps. 443.0 million towards other projects to maintain production capacity and towards sustainability, safety, modernization, optimization and infrastructure projects.

*2016 Ethylene Capital Expenditures Budget*

Our ethylene segment's 2016 budget includes Ps. 1,786 million in capital expenditures, which was allocated among the following ongoing projects as follows:

- Ps. 226.4 million to maintain the production capacity of the low density polyethylene plant at the Cangrejera petrochemical complex;
- Ps. 198.8 million to modernize and optimize the infrastructure and auxiliary services I of the Morelos petrochemical complex;
- Ps. 157.8 million to maintain the production capacity of the ethylene plant at the Morelos petrochemical complex;
- Ps. 149.0 million to maintain the production capacity of the Swing plant at the Morelos petrochemical complex;
- Ps. 123.5 million to maintain the production capacity of the Mitsui plant at the Morelos petrochemical complex;
- Ps. 101.2 million to operate and optimize the production capacity of the TREEP I/II of the Pajaritos petrochemical complex;
- Ps. 86.2 million to maintain the production capacity of auxiliary services at the Morelos petrochemical complex;

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- Ps. 78.6 million to maintain the production capacity of the ethylene oxide plant at the Morelos petrochemical complex;
- Ps. 75.0 million to maintain the production capacity of auxiliary services II at the Cangrejera petrochemical complex; and
- Ps. 43.0 million to modernize the fire protection network at the Cangrejera petrochemical complex.

### Fertilizers

Our fertilizers segment operates through the productive state-owned subsidiary Pemex Fertilizers, which was created effective August 1, 2015 and assumes the fertilizer assets of Pemex-Petrochemicals. This segment integrates the ammonia production chain up to the point of sale of fertilizers.

As described above, for the year ended December 31, 2015, we have presented operating results for our fertilizers segment together with results for our petrochemicals and ethylene segments. Therefore, to review results for this segment, please see “—Business Overview—Overview by Business Segment—Petrochemicals” above in this Item 4. Operating results for these segments will be presented separately for periods beginning January 1, 2016. For more information on our corporate restructuring and our new operating segments, see “—History and Development—Corporate Reorganization.” For a detailed description of the financial results of each segment, see our consolidated financial statements included herein.

#### *Investments in Fertilizers*

Our fertilizers segment invested Ps. 1,044 million on capital expenditures in 2015, which was allocated among the following ongoing projects as follows:

- Ps. 791.2 million to rehabilitate the ammonia plant IV and integration and auxiliary services for the Cosoleacaque petrochemical complex;
- Ps. 100.5 million to maintain the production capacity of the ammonia plant VII and its auxiliary services at the Cosoleacaque petrochemical complex;
- Ps. 97.4 million to maintain the production capacity of the ammonia plant VI at the Cosoleacaque petrochemical complex; and
- Ps. 55.5 million for safety, environmental and other projects.

#### *2016 Fertilizers Capital Expenditures Budget*

Our fertilizer segment's 2016 budget includes Ps. 444.0 million in capital expenditures, which was allocated among the following ongoing projects:

- Ps. 205.4 million to rehabilitate the ammonia plant IV and integration and auxiliary services at the Cosoleacaque petrochemical complex;
- Ps. 104.0 million for industrial and environmental safety projects for facilities of the Cosoleacaque petrochemical complex;
- Ps. 99.4 million to maintain the production capacity of the ammonia plant VII and its auxiliary services at the Cosoleacaque petrochemical complex; and
- Ps. 35.0 million to maintain the production capacity of the ammonia plant VI at the Cosoleacaque petrochemical complex.

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**Logistics**

Our logistics segment operates through the productive state-owned subsidiary Pemex Logistics, which was created effective October 1, 2015. It provides land, maritime and pipeline transportation, storage and distribution services to Petróleos Mexicanos and other companies, including the Federal Electricity Commission, *Aeropuertos y Servicios Auxiliares*, CENAGAS, local gas stations and distributors. The logistics segment assumed operations that were managed by certain deputy directors of the subsidiary entities prior to the recent corporate reorganization, including the Deputy Director of Maintenance and Logistics and the Deputy Director of Distribution of Hydrocarbons of Pemex-Exploration and Production, the Deputy Director of Storage and Allotment of Pemex-Refining and the Deputy Director of Pipelines of Pemex-Gas and Basic Petrochemicals.

During 2015, we transported 64,825 million ton-kilometers of crude oil and petroleum products, an 11.4% decrease as compared to 2014, due to decreased production in our exploration and production segment, decreased processing of crude oil in our refineries and the illicit market in fuels which can lead to temporary pipeline closures. During 2015, we transported approximately 5,142 million cubic feet per day of natural gas, 174 thousand barrels per day of LPG and 3,181 thousand barrels per day of crude oil and petroleum products to be processed in our refining system and to satisfy domestic demand for petroleum products, as compared to 4,819 million cubic feet per day of natural gas, 289 thousand barrels per day of LPG and 3,330 thousand barrels per day of crude oil and petroleum products transported in 2014. Of the total amount we transported in 2015, we carried 60.5% through pipelines, 25.7% by vessels and the remaining 13.8% by train tank cars and trucks.

Our pipelines connect crude oil and natural gas producing centers with refineries and petrochemical plants, and our refineries and petrochemical plants with Mexico's major cities. At the end of 2015, our pipeline network measured approximately 26,574 kilometers in length, of which 25,819 kilometers are operational and 755 kilometers are temporarily out of operation. These pipelines may be temporarily out of operation because of a decline in production in a field where the pipeline is located or because transportation service is irregular, making operation of the pipeline unprofitable. Once production is restored in that field, pipelines become operational again. We are currently analyzing the 755 kilometers of pipelines temporarily out of operation to determine if and how they may be used.

Approximately 5,259 kilometers of the pipelines currently in operation transport crude oil, 8,582 kilometers transport petroleum products and petrochemicals, 9,168 kilometers transport natural gas, 1,583 kilometers transport LPG and 1,982 kilometers transport basic and secondary petrochemicals. As of December 31, 2015, our logistics segment owned all of these pipelines. On January 1, 2016, the 9,168 kilometers of pipelines used to transport natural gas were transferred to CENAGAS. For more information, see “—Business Overview—Gas and Basic Petrochemicals—Pipelines” above in this Item 4, and Note 9 to our consolidated financial statements included herein.

We have been working to implement a pipeline integrity management plan, which is based on the guidelines of API Standard RP 1160, “Managing System Integrity for Hazardous Liquid Pipelines;” the American Society of Mechanical Engineers B31.8S, “Managing System Integrity of Gas Pipelines” and NOM-027.

The pipeline integrity management plan consists of the following stages:

- collection of detailed records and the development of a pipeline database;
- categorization and identification of threats that could affect pipeline integrity, safety and operation;
- identification of critical points in the pipeline;
- risk assessment and evaluation of pipeline integrity;
- maintenance and risk-mitigation planning; and
- ongoing monitoring during all stages.

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We have made considerable progress towards satisfying the requirements of NOM-027. Specifically, as of December 31, 2015, we have analyzed 100% of our overall logistics pipeline network. In addition, we have implemented several measures required by our pipeline integrity management plan, including our data collection requirements.

Despite having implemented strategies to improve the integrity and operation of our transportation pipeline network, we experienced 64 leaks and spills in 2015, which represents a 39% increase as compared to 46 incidents in 2014. Of the 64 incidents we experienced in transportation pipelines in 2015, 34 were due to a failure in the mechanical integrity of the pipelines, 15 were due to third-party incidents and 15 were due to other factors.

The transportation of crude oil, natural gas and other products through a pipeline network is subject to various risks, including risks of leaks and spills, explosions and theft. In 2015, we incurred a total of Ps. 4,134 million in expenditures for the remediation and maintenance of our pipeline network and we have budgeted an additional Ps. 1,581 million for these expenditures in 2016. For more information on recent issues with our pipeline network, see “Item 3—Key Information—Risk Factors—Risk Factors Related to Our Operations—We are an integrated oil and gas company and are exposed to production, equipment and transportation risks, criminal acts and deliberate acts of terror” and “—Environmental Regulation—Environmental Liabilities” below.

### *Fleet Developments*

As of December 31, 2015, we owned 16 refined product tankers and leased one. We also own 13 tugs, 1,485 tank trucks and 525 train tank cars, as well as 76 major wholesale storage and distribution centers, 12 liquefied gas terminals, five maritime terminals and 10 dock operation and maintenance facilities. These facilities, together with our pipeline network, constitute our hydrocarbon transportation and distribution infrastructure.

Our current fleet includes 17 vessels, of which we own 16 and lease one. Altogether, we have a transportation capacity of 5,069 thousand barrels. 64.5% of our vessels are located on the Pacific Coast and 35.5% are in the Gulf of Mexico. Of the vessels on the Pacific Coast, 80.1% are used to transport distillates, and 19.9% to transport fuel oil and heavy diesel. Of the vessels in the Gulf of Mexico, 98.1% are used for distillates and 1.9% for fuel oil and heavy diesel.

We are in the process of implementing a plan for the renewal and modernization of our fleet. This plan is part of a strategy to improve the efficiency of our fleet and to comply with safety and environmental standards. In 2011, we spent approximately U.S. \$184 million to acquire five refined product tankers. We acquired an additional refined product tanker in 2012 for approximately U.S. \$38.3 million. These tankers were acquired under leases with options to purchase, and are currently in operation. During 2013, we acquired four additional refined product tankers for approximately U.S. \$34.5 million each. In 2014, we acquired two additional tankers for approximately U.S. \$37.8 million each. We did not acquire any additional tankers during 2015. We plan to continue to renew our fleet in accordance with future demand for petroleum products.

On July 25, 2013, as part of a plan to modernize the fleet, we signed an agreement with the *Secretaría de Marina - Armada de México* (Mexican Navy) for the construction of 22 marine vessels for our refining segment, which includes 16 tugs, three multipurpose vessels and three barges. This transaction is valued at approximately U.S. \$250 million. We are providing the Mexican Navy with the technical specifications for the vessels and supervising their construction. Construction of the vessels began in 2014 and two tugs were delivered in 2015 for operations in the maritime terminal of Pajaritos. The remaining vessels are expected to be delivered in 2016 and 2017.

On November 26, 2013, our subsidiary company, P.M.I. Holdings B.V., signed an agreement to purchase a 51% stake in Hijos de J. Barreras, S.A., a Spanish shipyard. This transaction closed on December 16, 2013. The purpose of this acquisition is to transfer specialized shipbuilding technology to Mexico in order to continue to modernize our fleet. In February 2014, construction of an accommodation and support vessel for our fleet began at the shipyard. We expect the construction of this vessel, which will have the capacity to accommodate approximately 715 individuals, to be completed by the end of July 2016.

Table of Contents*Investments in Logistics*

Our logistics segment invested Ps. 9,827.0 million on capital expenditures in 2015, which was allocated among the following main ongoing projects as follows:

- Ps. 574.0 million to evaluate and rehabilitate the mechanical integrity of the Nuevo Teapa-Madero-Cadereyta pipelines;
- Ps. 520.0 million to implement the SCADA system in 47 pipeline transportation systems;
- Ps. 464.0 million to evaluate and rehabilitate the mechanical integrity of a variety of pipelines in the Central Zone;
- Ps. 461.0 million to evaluate and rehabilitate the mechanical integrity of the Poza Rica-Salamanca and Nuevo Teapa-Tula-Salamanca pipelines;
- Ps. 460.0 million to maintain the safety, measurement, control and automation systems in storage and distribution terminals;
- Ps. 458.0 million to obtain a larger, more modernized fleet;
- Ps. 403.0 million to transport natural gas from Jáltipan to the Salina Cruz refinery;
- Ps. 401.0 million to renew tugs, chalanes and multipurpose vessels of the smaller fleet; and
- Ps. 363.0 million to acquire five tankships by cash and/or by leasing.

*2016 Logistics Capital Expenditures Budget*

Our logistics segment's 2016 budget includes Ps. 4,449.0 million in capital expenditures, which was allocated among the following ongoing projects:

- Ps. 458.0 million to refurbish, modify and modernize pumping and compression stations nationwide;
- Ps. 463.0 million to maintain the safety, measurement, control and automation systems in storage and distribution terminals;
- Ps. 230.0 million to obtain a larger, more modernized fleet;
- Ps. 204.0 million to acquire five tankships by cash and/or by leasing;
- Ps. 179.0 million to evaluate and rehabilitate the mechanical integrity of the Nuevo Teapa-Madero-Cadereyta pipelines;
- Ps. 166.0 million to evaluate and rehabilitate the mechanical integrity of a variety of pipelines in Northern and Pacific Zones;
- Ps. 152.0 million towards the Integral Maintenance of Pipeline Systems for Natural Gas and LPG, Stage II;
- Ps. 143.0 million to implement the SCADA system in 47 pipeline transportation systems;
- Ps. 142.0 million to replace vessel tanks Nuevo Pemex I, II, III and IV by acquisition and/or leasing; and
- Ps. 129.0 million to renew tugs, chalanes and multipurpose vessels of the smaller fleet.



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**Cogeneration and Services**

Our cogeneration and services segment operates through the productive state-owned subsidiary Pemex Cogeneration and Services, which was created effective June 1, 2015. Our cogeneration and services segment intends to use thermal heat and steam from our industrial processes to produce the electricity required by Petróleos Mexicanos, as well as to generate surplus electricity to sell to third parties in Mexico. Facilities, both belonging to Petróleos Mexicanos and to third parties, are being evaluated for potential cogeneration projects.

Our cogeneration and services segment is currently developing four large scale cogeneration projects. These projects will be carried out in the gas processing complex of Cactus and in the Tula, Cadereyta and Salina Cruz refineries. The current estimated capacity for these four projects is 2,316 megawatts of electricity and 3,530 tons per hour of steam. We expect to begin operations for all four projects during 2019. We are also working on two smaller projects that are solely to generate electricity. At our Salina Cruz refinery, we are working on a project to generate 20 megawatts of electricity as of the first quarter of 2017. Also at our Salina Cruz refinery, a project is underway to use natural gas and metering stations to produce 72 megawatts of electricity. We anticipate that the first phase of this project will commence operations during the last quarter of 2017 and will generate up to 30 megawatts.

**International Trading**
*The PMI Group*

The PMI Group conducts international commercial activities for our crude oil, refined and petrochemical products, except for natural gas, which is marketed directly by our gas and basic petrochemicals segment. The PMI Group's main objectives are to assist in maximizing our profitability and optimizing our operations through the use of international trade, facilitating our link with the international markets and pursuing new business opportunities in marketing our products. The PMI Group manages the international sales of our crude oil and petroleum products and acquires in the international markets those petroleum products that we import to satisfy domestic demand. Sales of crude oil are carried out through PMI. Sales and purchases of petroleum products in the international markets are carried out through P.M.I. Trading, Ltd., which also performs third-party trading, transportation and risk management activities.

*Exports and Imports*

PMI purchases crude oil from our exploration and production segment and then sells it to PMI's customers. PMI sold an average of 1,172.5 thousand barrels of crude oil per day in 2015, which represented 51.7% of our total crude oil production.

The following tables set forth the composition and average prices of our crude oil exports for the periods indicated.

	Year ended December 31,									
	2011		2012		2013		2014		2015	
	(tbpd)	(%)	(tbpd)	(%)	(tbpd)	(%)	(tbpd)	(%)	(tbpd)	(%)
<b>Crude oil exports (by volume)</b>										
Olmecca (API gravity of 38°-39°)	203	15	194	15	99	8	91	8	124	11
Isthmus (API gravity of 32°-33°)	99	7	99	8	103	9	134	12	194	17
Maya (API gravity of 21°-22°)	1,022	76	944	75	968	81	887	78	743	63
Altamira (API gravity of 15.0°-16.5°)	14	1	19	2	20	2	27	2	28	2
Talam (API gravity of -15.8°)							3	0.3	83	7
Total	<u>1,338</u>	<u>100%</u>	<u>1,256</u>	<u>100%</u>	<u>1,189</u>	<u>100%</u>	<u>1,142</u>	<u>100%</u>	<u>1,172.5</u>	<u>100%</u>

Notes: Numbers may not total due to rounding.

tbpd = thousand barrels per day.

API gravity refers to the specific gravity or density of liquid petroleum products, measured in degrees on the American Petroleum Institute (API) scale. On the API scale, oil with the lowest specific gravity has the highest API gravity. In addition, holding all other factors constant, the higher the API gravity, the greater the value of the crude oil.

Source: PMI operating statistics as of January 11, 2016.

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		Year ended December 31,									
		2011		2012		2013		2014		2015	
		(U.S. dollars per barrel)									
Crude Oil Prices											
Olmeca	U.S.\$	109.83	U.S.\$	109.38	U.S.\$	107.92	U.S.\$	93.83	U.S.\$	51.46	
Isthmus		106.22		107.25		104.76		93.53		49.28	
Maya		98.97		99.98		96.91		84.36		41.36	
Altamira		96.60		96.29		94.35		81.35		36.19	
Talam								36.74		36.69	
Weighted average realized price		U.S.\$	101.13	U.S.\$	101.82	U.S.\$	98.46	U.S.\$	86.00	U.S.\$	43.29

Source: PMI operating statistics as of January 11, 2016.

#### Geographic Distribution of Export Sales

In 2015, 58.9% of PMI's sales of our crude oil exports were to customers located in the United States, which represents a 14.8% decrease as compared to 2014. The decrease in our crude oil exports to the United States can be attributed primarily to a decrease in the availability of crude oil for export due to the decreased production of crude oil.

As of December 31, 2015, PMI had 36 customers in 15 countries. Among these countries, the largest proportion of our exports has consistently been to customers in the United States, Spain, India, Canada, South Korea, Japan and China. Since 2009, the percentage of our crude oil export sales to the United States and Canada compared to our total crude oil export sales has declined, while the proportion of crude oil export sales to countries in Europe and Asia, particularly Spain and India, has increased. In 2015, 58.9% of our crude oil exports were to customers located in the United States, which represents a 14.8% decrease as compared to 2014. The decrease in our crude oil exports to the United States can be attributed mainly to the steady increase of domestic production of light and extra-light crude oil in the United States, primarily as a result of shale discoveries and advances in technology that have made extraction of oil from shale rock commercially viable. In response to the increased availability of light crude oil in the U.S. Gulf of Mexico and other developing trends in international demand for imported crude oil, we have expanded the scope of its geographic distribution and renewed our strategy to diversify and strengthen the presence of Mexican crude oil in the international market. In January 2014, PMI began exporting Olmeca crude oil to European countries other than Spain. As part of our initiative to increase export sales of crude oil to East Asia, PMI also began exporting Isthmus and Maya crude oil to South Korea in January 2015.

The following table sets forth our crude oil export sales by country for the five years ended December 31, 2015.

#### Crude Oil Exports by Country

	Percentage of Exports				
	2011	2012	2013	2014	2015
United States	81.8%	76.2%	72.1%	69.4%	58.9%
Spain	8.3	13.2	14.4	14.2	13.8
India	2.8	6.0	8.2	7.0	9.1
Canada	1.5	1.8	1.9	1.8	—
China	2.7	0.8	1.6	1.2	1.3
Others	2.8	2.0	1.8	6.3	16.9
Total	100.0%	100.0%	100.0%	100.0%	100%

Note: Numbers may not total due to rounding.

Source: PMI operating statistics as of January 11, 2016.

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The following table sets forth the geographic distribution of PMI's sales of crude oil exports for the five years ended December 31, 2015. The table also presents the distribution of exports among PMI's crude oil types for those years.

### Composition and Geographic Distribution of Crude Oil Export Sales

	Year ended December 31,									
	2011		2012		2013		2014		2015	
	(tbpd)	(%)	(tbpd)	(%)	(tbpd)	(%)	(tbpd)	(%)	(tbpd)	(%)
<b>PMI Crude Oil Export Sales to:</b>										
United States and Canada	1,116	83	980	78	879	74	813	74	691	59
Europe	131	10	176	14	184	15	292	15	247	21
Far East	74	6	85	7	111	9	15	9	219	19
Central and South America	18	1	14	1	15	1	23	1	15	1
Total	<u>1,338</u>	<u>100</u>	<u>1,256</u>	<u>100</u>	<u>1,189</u>	<u>100</u>	<u>1,142</u>	<u>100</u>	<u>1,172</u>	<u>100</u>
<b>Olmecca (API gravity of 38°-39°)</b>										
United States and Canada	192	14	184	15	90	8	35	3	41	4
Others	<u>11</u>	<u>1</u>	<u>9</u>	<u>1</u>	<u>8</u>	<u>1</u>	<u>56</u>	<u>5</u>	<u>83</u>	<u>7</u>
Total	<u>203</u>	<u>15</u>	<u>194</u>	<u>15</u>	<u>99</u>	<u>8</u>	<u>91</u>	<u>8</u>	<u>124</u>	<u>11</u>
<b>Isthmus (API gravity of 32°-33°)</b>										
United States and Canada	80	6	58	5	62	5	89	8	78	7
Others	<u>20</u>	<u>1</u>	<u>41</u>	<u>3</u>	<u>41</u>	<u>3</u>	<u>45</u>	<u>4</u>	<u>116</u>	<u>10</u>
Total	<u>100</u>	<u>7</u>	<u>99</u>	<u>8</u>	<u>103</u>	<u>9</u>	<u>134</u>	<u>12</u>	<u>194</u>	<u>17</u>
<b>Maya (API gravity of 21°-22°)</b>										
United States and Canada	830	62	719	57	707	60	662	58	513	44
Others	<u>192</u>	<u>14</u>	<u>224</u>	<u>18</u>	<u>260</u>	<u>22</u>	<u>225</u>	<u>20</u>	<u>230</u>	<u>20</u>
Total	<u>1,022</u>	<u>76</u>	<u>944</u>	<u>75</u>	<u>968</u>	<u>81</u>	<u>887</u>	<u>78</u>	<u>743</u>	<u>63</u>
<b>Altamira (API gravity of 15.0°-16.5°)</b>										
United States and Canada	14	1	18	1	20	2	27	2	28	2
Others	<u>—</u>	<u>—</u>	<u>1</u>	<u>1</u>	<u>—</u>	<u>—</u>	<u>0.4</u>	<u>0.4</u>	<u>—</u>	<u>—</u>
Total	<u>14</u>	<u>1</u>	<u>19</u>	<u>2</u>	<u>20</u>	<u>2</u>	<u>27</u>	<u>2</u>	<u>28</u>	<u>2</u>
<b>Talam (API gravity of 15.8°)</b>										
United States and Canada	—	—	—	—	—	—	—	—	31	3
Others	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>3</u>	<u>0.3</u>	<u>52</u>	<u>4</u>
Total	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>3</u>	<u>0.3</u>	<u>83</u>	<u>7</u>

Notes: Numbers may not total due to rounding.

tbpd = thousand barrels per day.

API gravity refers to the specific gravity or density of liquid petroleum products, measured in degrees on the API scale. On the API scale, oil with the lowest specific gravity has the highest API gravity.

In addition, holding all other factors constant, the higher the API gravity, the greater the value of the crude oil.

Source: PMI operating statistics as of January 11, 2016.

PMI sells a significant percentage of its crude oil under evergreen contracts, which can be terminated by either party pursuant to a three month phase-out clause. In addition, PMI enters into agreements with various international customers, including those located in the United States, Europe, India, China and Japan. PMI's crude oil exports are sold on a *Free On Board (FOB)* basis.

In total, we exported 1,172.5 million barrels of crude oil per day in 2015. In 2016, we expect to export approximately 1.10 million barrels of crude oil per day.

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The following table sets forth the average volume of our exports and imports of crude oil, natural gas and petroleum products for the five years ended December 31, 2015.

### Volume of Exports and Imports

	Year ended December 31,					2015 vs. 2014 (%)
	2011	2012	2013	2014	2015	
	(in thousands of barrels per day, except as noted)					(%)
<b>Exports</b>						
Crude Oil:						
Olmeca	202.9	193.7	98.6	91.2	124.2	36.2
Isthmus	99.3	99.4	102.7	133.7	194.0	45.1
Maya	1,021.6	943.7	967.6	887.1	743.4	(16.2)
Altamira	14.0	18.8	19.9	27.2	27.8	2.2
Talam	—	—	—	3.0	83.1	2,670.0
Total crude oil	<u>1,337.8</u>	<u>1,255.5</u>	<u>1,188.8</u>	<u>1,142.3</u>	<u>1,172.5</u>	<u>2.6</u>
Natural gas <sup>(1)</sup>	1.3	0.9	3.1	4.1	2.8	(31.7)
Petroleum products	175.9	152.6	164.5	193.5	198.9	2.8
Petrochemical products <sup>(2)(3)(4)</sup>	442.9	1,344.7	1,336.9	488.0	345.8	(29.2)
<b>Imports</b>						
Natural gas:						
Natural gas <sup>(1)</sup>	790.8	1,089.3	1,175.4	1,250.4	1,324.5	5.9
Liquefied natural gas <sup>(1)(4)</sup>	—	—	114.3	107.4	93.9	(12.6)
Total natural gas	<u>790.8</u>	<u>1,089.3</u>	<u>1,289.7</u>	<u>1,357.8</u>	<u>1,418.4</u>	<u>4.5</u>
Petroleum products	631.9	570.9	516.2	548.5	630.1	14.9
Petrochemical products <sup>(2)(5)</sup>	224.9	445.1	287.8	332.7	336.1	1.0

Note: Numbers subject to adjustment because crude oil exports may be adjusted to reflect the percentage of water in each shipment.

(1) Numbers expressed in millions of cubic feet per day.

(2) Thousands of metric tons.

(3) Includes propylene.

(4) In 2013, we began importing liquefied natural gas through Manzanillo.

(5) Includes isobutane, butane and N-butane.

Source: PMI operating statistics as of January 11, 2016, and Pemex Industrial Transformation.

Crude oil exports increased by 2.6% in 2015, from 1,142.3 thousand barrels per day in 2014 to 1,172.5 thousand barrels per day in 2015, mainly due to a 45.1% increase of exports of Isthmus crude oil and a 36.2% increase in exports of Olmeca crude oil, which was partially offset by a 16.2% decrease in exports of Maya crude oil.

Natural gas imports increased by 4.5% in 2015, from 1,357.8 million cubic feet per day in 2014 to 1,418.4 million cubic feet per day in 2015, which includes imports of liquefied natural gas through Manzanillo. The lower availability of wet gas and natural gas from our exploration and production segment's fields made it necessary to increase natural gas imports. We exported 2.8 million cubic feet of natural gas per day in 2015, a decrease of 33.5% as compared to natural gas exports in 2014 of 4.1 million cubic feet per day, primarily as a result of a decrease in the temporary surplus of natural gas that was originally designated for domestic consumption and subsequently used for export.

In 2015, exports of petroleum products decreased by 12.0%, from 193.5 thousand barrels per day in 2014 to 170.2 thousand barrels per day in 2015, due to a 16.0% decrease in sales of fuel oil. Imports of petroleum products increased by 14.9% in 2015, from 548.5 thousand barrels per day in 2014 to 630.1 thousand barrels per day in 2015, primarily due to increased domestic demand for gasoline and diesel. As of January 2007, clean fuels specifications for gasoline and diesel for transportation were established in Mexico. Since that time, imports of ULSD and ultra-low sulfur premium gasoline have been required to meet domestic demand.

#### U.S. Light Crude Oil Import License

On October 28, 2015, the U.S. Department of Commerce granted us a one-year license that would allow us to import up to 75,000 barrels per day of light crude oil and/or condensates from the United States in exchange for sending an equal amount of Mexican heavy crude oil to refineries in the northern coast of the U.S. Gulf of Mexico. This license became unnecessary when, on December 18, 2015, the United States officially repealed its crude oil export limits.

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In light of these events, we are working on our infrastructure, including our tanks and pipelines, to be able to import crude oil. The amount of crude oil we import will depend on our future needs, particularly our plans to increase production margins, improve gasoline and diesel production by processing more light crude oil and other opportunities on the international market. We have not imported any light crude oil as of the date of this annual report.

P.M.I. Trading, Ltd. sells refined and petrochemical products on an *FOB, Delivered Ex-ship* and *Cost and Freight* basis and buys refined and petrochemical products on an *FOB, Cost and Freight* and *Delivered Ex-ship* or *Delivery at Frontier* basis.

The following table sets forth the value of exports and imports of crude oil, natural gas and petroleum products for the five years ended December 31, 2015.

	Value of Exports and Imports <sup>(1)</sup>					
	Year ended December 31,					2015
	2011	2012	2013	2014	2015	vs. 2014
	(in millions of U.S. dollars)					(%)
Exports						
Olmeca	U.S.\$ 8,133.0	U.S.\$ 7,753.7	U.S.\$ 3,883.9	U.S.\$ 3,114.7	U.S.\$ 2,333.7	(25.1)
Isthmus	3,849.1	3,904.4	3,928.1	4,556.8	3,489.5	(23.4)
Altamira	492.7	661.6	683.7	806.8	367.0	(54.5)
Maya <sup>(2)</sup>	36,904.9	34,532.6	34,218.2	27,119.4	11,221.9	(58.6)
Talam	—	—	—	40.4	1,112.2	2,653.0
Total crude oil <sup>(3)</sup>	U.S.\$49,379.6	U.S.\$46,852.3	U.S.\$42,711.7	U.S.\$35,638.2	U.S.\$18,524.4	(48.0)
Natural gas	1.6	0.6	2.8	4.8	1.6	(66.7)
Petroleum products	6,277.5	5,538.0	5,817.2	5,871.7	2,992.2	(49.0)
Petrochemical products	298.6	362.9	234.0	166.9	83.6	(49.9)
Total natural gas and products	U.S.\$ 6,577.7	U.S.\$ 5,901.5	U.S.\$ 6,054.0	U.S.\$ 6,040.3	U.S.\$ 3,077.4	(49.0)
Total exports	U.S.\$55,957.3	U.S.\$52,687.7	U.S.\$48,777.2	U.S.\$41,895.7	U.S.\$21,601.8	(48.4)
Imports						
Natural gas	U.S.\$ 1,272.2	U.S.\$ 1,216.2	U.S.\$ 1,728.7	U.S.\$ 2,197.3	U.S.\$ 1,411.1	(35.8)
Liquefied natural gas <sup>(4)</sup>	—	—	766.6	621.9	262.5	(57.8)
Total natural gas	U.S.\$ 1,272.2	U.S.\$ 1,216.2	U.S.\$ 2,495.3	U.S.\$ 2,819.3	U.S.\$ 1,673.6	(40.6)
Petroleum products	28,019.1	27,272.4	23,916.8	23,553.7	17,813.4	(24.4)
Petrochemical products	277.5	526.9	322.3	373.3	318.7	(14.6)
Total imports	U.S.\$29,568.9	U.S.\$29,015.4	U.S.\$26,734.4	U.S.\$26,746.3	U.S.\$19,805.7	(25.9)
Net exports	U.S.\$26,388.5	U.S.\$23,672.3	U.S.\$22,042.8	U.S.\$15,149.4	U.S.\$ 1,796.1	88.1

Note: Numbers may not total due to rounding.

(1) Does not include crude oil, refined products and petrochemicals purchased by P.M.I. Trading, Ltd. or P.M.I. Norteamérica, S.A. de C.V. from third parties outside of Mexico and resold in the international markets. The figures expressed in this table differ from the amounts contained under the line item "Net Sales" in our financial statements because of differences in methodology associated with the calculation of the exchange rates and other minor adjustments.

(2) Includes Talam crude oil in 2014 and 2015.

(3) Crude oil exports are subject to adjustment to reflect the percentage of water in each shipment.

(4) In 2013, we began importing liquefied natural gas through Manzanillo.

Source: PMI operating statistics as of January 11, 2016, which are based on information in bills of lading, and Pemex Industrial Transformation.

Imports of natural gas decreased in value by 35.8% during 2015, primarily as a result of a decrease in natural gas prices, which was partially offset by an increase in domestic demand for natural gas.

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The following table describes the composition of our exports and imports of selected refined products in 2013, 2014 and 2015.

#### Exports and Imports of Selected Petroleum Products

	Year ended December 31,					
	2013		2014		2015	
	(tbpd)	(%)	(tbpd)	(%)	(tbpd)	(%)
<b>Exports</b>						
Gasoline <sup>(1)</sup>	71.8	43.6	67.6	34.7	64.6	32.5
Liquefied petroleum gas <sup>(2)</sup>	0.2	0.1	1.3	0.7	0.0	0.0
Jet fuel	1.2	0.7	—	—	—	—
Fuel oil	82.9	50.3	123.6	63.4	128.4	64.6
Others	8.6	5.2	2.4	1.2	5.9	3.0
Total	<u>164.7</u>	<u>100.0%</u>	<u>194.9</u>	<u>100.0%</u>	<u>198.9</u>	<u>100.0%</u>
<b>Imports</b>						
Gasoline <sup>(3)</sup>	370.4	62.2	389.7	61.5	441.1	60.0
Fuel oil	34.1	5.7	13.0	2.1	16.9	3.0
Liquefied petroleum gas <sup>(2)</sup>	79.5	13.3	85.0	13.4	105.2	14.3
Diesel	108.0	18.1	132.8	21.0	145.4	9.8
Others	3.7	0.6	13.0	2.1	26.3	3.6
Total	<u>595.7</u>	<u>100.0%</u>	<u>633.5</u>	<u>100.0%</u>	<u>734.9</u>	<u>100.0%</u>

Notes: Numbers may not total due to rounding.  
tbpd = thousand barrels per day.

(1) Includes gasoline and blendstock.

(2) Includes butanes.

(3) Includes methyl tert-butyl ether (MTBE), naphtha and pentanes.

Source: PMI operating statistics as of January 11, 2016, based on INCOTERMS (International Commercial Terms).

Exports of petroleum products decreased in value by 49.0% in 2015, primarily due to decreased sales of fuel oil and decreases in the prices of petroleum products. In 2015, imports of petroleum products decreased in value, by 24.4%, and increased in volume, by 14.9%, primarily due to increased domestic demand for regular gasoline, which resulted from the national refining system's increased production of this type of gasoline as compared to previous years and a decrease in the prices of petroleum products. Our net imports of petroleum products for 2015 totaled U.S. \$14,821.2 million, which represents a 16.2% decrease from our net imports of petroleum products of U.S. \$17,685.1 million in 2014.

For the three years ended December 31, 2015, our exports and imports of selected petrochemicals were as follows:

#### Exports and Imports of Selected Petrochemicals

	Year ended December 31,					
	2013		2014		2015	
	(tmt)	(%)	(tmt)	(%)	(tmt)	(%)
<b>Exports</b>						
Sulfur	473.7	35.4	335.6	68.8	282.7	81.8
Ammonia	39.0	2.9	—	—	—	—
Ethylene	6.1	0.5	15.6	3.2	1.5	0.4
Polyethylenes	29.8	2.2	23.9	4.9	10.9	3.2
Others	788.4	59.0	112.9	23.1	50.7	14.7
Total	<u>1,336.9</u>	<u>100.0%</u>	<u>488.0</u>	<u>100.0%</u>	<u>345.8</u>	<u>100.0%</u>

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	Year ended December 31,					
	2013		2014		2015	
	(tmt)	(%)	(tmt)	(%)	(tmt)	(%)
<b>Imports</b>						
Isobutane-butane-hexane-1	199.7	69.4	228.7	68.7	190.0	56.5
Methanol	35.1	12.2	50.1	15.1	30.0	8.9
Xylenes	18.0	6.3	3.0	0.9	3.0	0.9
Toluene	8.4	2.9	10.5	3.2	25.0	7.4
Propylene	—	—	—	—	—	—
Others	26.6	9.3	40.4	12.1	41.6	12.4
Total	<u>287.8</u>	<u>100.0%</u>	<u>332.7</u>	<u>100.0%</u>	<u>336.1</u>	<u>100.0%</u>

Notes: Numbers may not total due to rounding.

tmt = thousand metric tons.

Exports include propylene. Imports include isobutane, butane and N-butane.

Source: PMI operating statistics as of January 11, 2016, based on INCOTERMS.

In 2015, our exports of petrochemical products decreased by 29.2%, from 488.0 thousand metric tons in 2014 to 345.8 thousand metric tons in 2015. Our imports of petrochemical products increased by 1.0%, from 332.7 thousand metric tons in 2014 to 336.1 thousand metric tons in 2015. Petrochemical exports decreased in 2015, mainly due to lower sales of ammonia, sulfur and polyethylenes. Imports of petrochemical products increased in 2015, primarily due to higher demand for catalysts and toluene, among others.

#### Supply Commitments

We sell crude oil through a variety of contracts, some of which specify the delivery of a fixed and determinable quantity of crude oil. As of the date of this report, we are party to the following long-term crude oil supply agreements:

- An agreement executed on May 1, 1999, among PMI, Pecten Trading Company, which is a trading subsidiary of Shell Oil Company, and P.M.I. Norteamérica, S.A. de C.V., to supply the Deer Park refinery joint venture with a total of approximately 200 thousand barrels per day of Maya crude oil. Effective May 2008, this agreement was amended to reduce the supply to approximately 170 thousand barrels per day of Maya crude oil from May 2008 to March 2023 (when the agreement expires). In addition, PMI has agreed to supply additional volume depending on the availability of Maya crude oil. The additional volume is revised frequently, taking into account the refinery's needs, as well as PMI's available supply. In 2012 and 2013, PMI provided an additional 30 thousand barrels per day of Maya crude oil from January 1, 2012 through December 31, 2013, increasing the total volume supplied during this period to 200 thousand barrels per day. For the period from January 2014 through December 31, 2016, the total volume to be supplied has been reduced to 170 thousand barrels per day.
- An agreement executed on May 1, 2012, with Chevron Products Company, a division of Chevron U.S.A. Inc., to supply its refinery in Pascagoula, Mississippi with approximately 95 thousand barrels per day of Maya crude oil for a period of three years. On May 1, 2015, this agreement was extended for three additional years, however, our supply commitment was decreased to approximately 51 thousand barrels per day of Maya crude oil.
- An agreement executed on January 1, 2014, with Valero Marketing and Supply Company Co., a subsidiary of Valero Energy Corp., to supply its refineries in the United States with approximately 80 thousand barrels per day of Maya crude oil for a period of four years, with an option to extend this agreement subject to the express agreement of both parties.
- An agreement executed in January 2013 and extended on October 20, 2014 with Unipet America, Inc., acting on behalf of Unipet Asia Co., Ltd., a branch of China International United Petroleum & Chemicals Co. Ltd., which is a subsidiary of SINOPEC, to export crude oil to China. Under this agreement, we will export 500 thousand barrels of Maya crude oil each month until July 2016, for an aggregate amount of 22 million barrels of crude oil exports. This agreement is limited to the specific purpose of establishing the terms for our crude oil exports to China. We intend to extend this agreement for two additional years.

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- Two agreements with Houston Refining LP, one executed on January 1, 2015 and the other on July 1, 2015. Under each agreement, PMI has agreed to export 36 thousand barrels per day of Maya crude oil over a period of two years.
- The remainder of our supply agreements were entered into with eleven different customers and require that we deliver a total of approximately 140 thousand barrels per day of crude oil during the next one to two years.

We expect to fulfill the majority of these supply commitments with both proved developed and proved undeveloped reserves.

*Hedging Operations*

P.M.I. Trading, Ltd. engages in hedging operations to cover its price exposure in the trading of petroleum products. The internal policies and procedures of P.M.I. Trading, Ltd. establish: (1) that DFIs are used exclusively to mitigate the volatility of hydrocarbon prices; (2) limits on the maximum amount of capital at risk and on the daily and accumulated annual losses for each business unit; and (3) the segregation of risk-taking and risk measurement. Capital at risk is calculated on a daily basis in order to compare the actual figures with the aforementioned limit. P.M.I. Trading, Ltd. has a risk management subcommittee that reviews risk and hedging operations and meets on a quarterly basis. See “Item 11—Quantitative and Qualitative Disclosures about Market Risk—Changes in Exposure to Main Risks—Hydrocarbon Price Risk.”

*Gas Stations in the United States*

On December 3, 2015, we announced our initiative to open gas stations in the United States by opening five gas stations that will be owned and operated by franchisees in Houston, Texas. This is part of our strategy to expand our operations to the United States in order to fulfill the recent energy reform’s mandate to generate economic value in international markets. Further, it will allow us to measure the impact of our brand against others and identify business opportunities abroad. The gas stations’ fuel supply is derived from the United States wholesale market and selling prices are subject to local market conditions. As of the date of this report, all five of these gas stations have commenced operations.

**PEMEX Corporate Matters**

In addition to the operating activities that we undertake through the activities of our subsidiary entities and subsidiary companies, we have certain centralized corporate operations that coordinate general labor, safety, insurance and legal matters.

*Industrial Safety and Environmental Protection*

Our Corporate Office of Planning, Coordination and Performance is responsible for planning, conducting and coordinating programs to:

- foster a company culture of safety and environmental protection;
- improve the safety of our workers and facilities;
- reduce risks to residents of the areas surrounding our facilities;
- protect the environment; and
- reduce greenhouse gas emissions and identify the risks associated with climate change in Mexico in order to develop strategies to minimize the impact of climate change on our operations.



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We intend to develop further the industrial safety and environmental programs for each subsidiary entity. The environmental and safety division of each subsidiary entity coordinates closely with the Corporate Office of Planning, Coordination and Performance.

### *Insurance*

We maintain a comprehensive property and general liability insurance program for onshore and offshore properties and liabilities. All onshore properties, such as refineries, processing plants, pipelines and storage facilities are covered, as are all of our offshore assets, such as drilling platforms, rigs, gas gathering systems, maritime terminals and production facilities. Our insurance covers risks of sudden and accidental physical damage to or destruction of our properties, as well as against all risk of physical loss, including as a consequence of purposeful terrorist acts. This insurance also provides coverage for the contents of pipelines, storage facilities and wells, and any of our liabilities arising from such acts. Our insurance also covers extraordinary costs related to the operation of offshore wells, such as control and re-drilling costs, evacuation expenses and liability costs associated with spills. We also maintain protection and indemnity insurance for our full marine fleet, in addition to life insurance, automobile and heavy equipment insurance, cargo and marine hull insurance, risk insurance for deep water drilling activities and construction risk insurance.

In accordance with Mexican law, we have entered into all of our insurance contracts with Mexican insurance carriers. These policies have limits of U.S. \$1.8 billion for onshore property, U.S. \$1.3 billion for offshore property, U.S. \$0.3 billion for extraordinary costs related to the operation of offshore wells, U.S. \$1.0 billion for marine-related liabilities, U.S. \$1.1 billion for onshore and offshore liabilities, U.S. \$0.5 billion for offshore terrorist acts and U.S. \$0.5 billion for onshore terrorist acts. Limits of insurance policies purchased for each category of risk are determined using professional risk management assessment surveys conducted by international companies on an annual basis and the market capacity available per risk.

Since June 2003, we have not maintained business interruption insurance, which in the past compensated us for loss of revenues resulting from damages to our facilities. We have discontinued such insurance based on the following factors: (1) the existence of mitigating factors across all of our facilities, (2) the nature and operation of our facilities, such as the ability of any of our six refineries to compensate for the loss of one refinery and the physical separation of plants within the refineries, and (3) the excess processing capacity available across our different lines of business, vis-à-vis the restricted coverage available in the international reinsurance markets. These factors led us to conclude that the benefits of this type of coverage were outweighed by the costs. Instead, we purchase *ad-hoc* business interruption mitigation insurance coverage, which compensates us for the additional expenses necessary to recover our production capabilities in the shortest time possible.

During 2015 we continued to engage in deep water exploratory and drilling activities that were covered by our existing insurance program. In August 2012, we purchased a policy to increase the coverage available for potential property damage, third-party liability and control of well risks related to these activities. Under this policy, we maintain coverage for each deep water well drilled, and the limits are determined based on the risk profile of the corresponding well. This policy has a limit of U.S. \$3.3 billion, including U.S. \$1.3 billion for control of well risks, U.S. \$1.1 billion for casualty and U.S. \$0.9 billion for property damage, which represents the maximum amount of coverage we have been able to secure in the international reinsurance markets. This policy also contemplates additional coverage for environmental liabilities and remediation activities relating to deep water exploration and drilling.

All of our insurance policies are in turn reinsured through Kot Insurance Company, AG (which we refer to as Kot AG). Kot AG is a wholly owned subsidiary company that was originally formed in 1993 under the laws of Bermuda as Kot Insurance Company, Ltd. and was subsequently organized under the laws of Switzerland in 2004. Kot AG is used as a risk management tool to structure and distribute risks across the international reinsurance markets. The purpose of Kot AG is to reinsure policies held through our local insurance carriers and maintain control over the cost and quality of the insurance covering our risks. Kot AG reinsures over 99% of its reinsurance policies with unaffiliated third-party reinsurers. Kot AG carefully monitors the financial performance of its reinsurers and actively manages counterparty credit risk across its reinsurance portfolio to ensure its own financial stability and maintain its creditworthiness. Kot AG maintains solid capitalization and solvency margins consistent with guidelines provided by Swiss insurance authorities and regulations. As of December 31, 2015, Kot AG's net risk retention is capped at U.S. \$ 105 million, of which U.S. \$ 100 million corresponds to property and liabilities, and is spread across different reinsurance coverage to mitigate potential aggregation factors.

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### *Investment in Repsol*

Until June 3, 2014, we held a synthetic long position on 67,969,767 shares of Repsol, S.A. (formerly known as Repsol YPF, S.A. and which we refer to as Repsol). On June 4, 2014, we announced the sale of a total of 104,057,057 shares of Repsol (67,969,767 shares of the synthetic long position held by Petróleos Mexicanos and 36,087,290 shares held by our wholly-owned subsidiary, P.M.I. Holdings, B.V.), representing 7.86% of Repsol's share capital, at a price of €20.10 per share. As a result of this sale, we recognized a loss of Ps. 215.1 million. As of December 31, 2015 and April 29, 2015, our share of the economic and voting rights in Repsol was 1.48% and 1.50%, respectively. See "Item 11—Quantitative and Qualitative Disclosures about Market Risk—Changes in Exposure to Main Risks—Risks Relating to the Portfolio of Third-Party Shares" for a description of this position.

On May 7, 2012, the Government of the Republic of Argentina enacted a law that provided for the expropriation of 51% of the Class D shares of Yacimientos Petrolíferos Fiscales S.A., all of which are owned, directly or indirectly, by Repsol. On February 25, 2014, Repsol's board of directors approved an agreement with the Government of the Republic of Argentina whereby the Republic of Argentina would pay U.S. \$5 billion in the form of dollar-denominated government bonds of the Republic of Argentina as compensation for the expropriation of Repsol's stake in Yacimientos Petrolíferos Fiscales S.A. In order to become effective, the agreement must also be approved by Repsol's shareholders and both chambers of the Congress of the Republic of Argentina. On March 27, 2014, the Senate of the Republic of Argentina voted in favor of the settlement agreement. On March 28, 2014, Repsol's shareholders ratified the agreement. On April 24, 2014, the Chamber of Deputies of the Republic of Argentina approved the agreement, which took effect on the same date.

On June 19, 2012, Repsol approved a dividend program under which Repsol shareholders had the option to receive their pro rata portion of the dividend declared at the annual meeting in the form of either new shares of Repsol or cash. On June 29, 2012, Petróleos Mexicanos opted to receive its dividend in cash, which we received on July 13, 2012, while on July 9, 2012, P.M.I. Holdings, B.V. received its dividend in the form of 2,600,191 new Repsol shares. As part of the same program, on January 21 and July 16, 2013, P.M.I. Holdings, B.V. opted to receive dividends in the form of 1,683,322 and 1,506,130 new Repsol shares, respectively, and subsequently opted to receive 1,451,455 and 488,923 new Repsol shares on January 17 and July 16, 2014, respectively. In addition, P.M.I. Holdings B.V. received a €5.1 million extraordinary cash net dividend paid by Repsol on June 17, 2014.

On August 9, 2013, we divested our direct interest in 9,289,968 shares of Repsol, which resulted in a net profit of Ps. 278.8 million. On the same date, we entered into an equity swap for the same number of shares with a notional amount of Ps. 2,869.9 million through which we retain economic and voting rights in such shares. See Note 10 to our consolidated financial statements included herein.

As of December 31, 2015 we owned a total of 20,724,331 shares of Repsol. As described in Note 10 to our consolidated financial statements, we recorded the 20,724,331 Repsol shares that we hold as "available-for-sale non-current asset" investments and valued them, as of December 31, 2015, at Ps. 3,944.7 million. As of December 31, 2014 our investment in 19,557,004 shares of Repsol was valued at Ps. 5,414.6 million. As described in Note 10 to our consolidated financial statements, we recorded the effect of the valuation of the investment at fair value as a loss of Ps. 765.4 million and Ps. 3,206.3 million in the consolidated statements of changes in equity (deficit) for the years ended December 31, 2014 and 2015. In addition, we recorded dividend payments received from Repsol of Ps. 914.1 million, Ps. 736.3 and Ps. 359.9 million in the consolidated statements of comprehensive income for the years ended December 31, 2013, 2014 and 2015, respectively.

On August 4, 2015, P.M.I. Holdings, B.V. obtained a loan for U.S. \$250.0 million, which bears interest at a rate of 1.79% and is collateralized by all of our Repsol shares. This loan is due to mature in 2018.

### *Creation of Ethics Committee*

On February 12, 2015, our Ethics Committee was formed with members from our management team and our Corporate Director of Management serving as its chair. Among other duties, the Ethics Committee is responsible for monitoring the implementation and enforcement of our new code of ethics, as well as promoting corporate strategies that are designed to foster a culture of ethics and integrity. See "Item 16B—Code of Ethics" for more information regarding our new code of ethics.

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*Collaboration and Other Agreements*

On April 6, 2013, Petróleos Mexicanos signed two memoranda of understanding and cooperation with China National Petroleum Corporation, a Chinese state-owned oil and gas company, and Xinxing Cathay International Group Co. Ltd., respectively, to establish terms for future cooperation on issues related to upstream activities, as well as technical exchanges in various areas.

On April 9, 2013, Petróleos Mexicanos and Mitsui Corporation, Ltd. signed a memorandum of understanding and cooperation to discuss future collaborations in oil and gas projects, including, among others, the possibility of developing a pipeline from the U.S. to Mexico to import natural gas.

On June 4, 2013, Petróleos Mexicanos signed a framework cooperation agreement with the Export-Import Bank of China to explore financing opportunities, including export credit facilities for an aggregate amount of up to U.S. \$1.0 billion. Funds provided by these export credit facilities may be used to charter or acquire vessels, offshore equipment and related products of Chinese origin.

On July 3, 2013, Petróleos Mexicanos entered into a non-commercial collaboration agreement with Nacional Financiera, S.N.C., one of Mexico's development banks, to, among other things, cooperate in the provision by Nacional Financiera, S.N.C. of a line of credit to Petróleos Mexicanos' domestic suppliers.

On July 30, 2013, Petróleos Mexicanos entered into a non-commercial collaboration agreement with Ecopetrol, a Colombian oil and gas company, to cooperate on technical and scientific matters relating to exploration, production, refining, petrochemicals and transportation.

On October 16, 2013, Petróleos Mexicanos signed a memorandum of understanding with the Export-Import Bank of Korea intended to help finance a range of our projects through a U.S. \$2.0 billion line of credit. Funds provided under this line of credit may also be used by companies that provide services to Petróleos Mexicanos.

On April 10, 2014, Petróleos Mexicanos signed a memorandum of understanding with TOTAL, a French company, to establish a framework for cooperation in the exchange of experience, knowledge and best practices related to upstream activities and scientific, administrative and technical matters, as well as the development of a sustainable energy sector.

On April 10, 2014, Petróleos Mexicanos signed a memorandum of understanding with GDF Suez, a French company, to establish terms for technical cooperation and the exchange of knowledge and experience related to energy efficiency, water treatment and natural gas projects, among others.

On September 25 and 26, 2014 at the World National Oil Companies Congress, Petróleos Mexicanos signed a memorandum of understanding with each of: (1) Petronas and YPF SA, (2) BHP Billiton and (3) Oil and Natural Gas Corporation Limited, through which the parties indicated their intent to analyze business opportunities in deep water, mature fields and heavy and extra-heavy crude oil, assess natural gas infrastructure and exchange best practices for sustainable development, environmental protection and exploration and production activities.

On October 2, 2014, Petróleos Mexicanos and Exxon Mobil signed a memorandum of understanding with the aim of identifying business opportunities in exploration, production and industrial transformation processes with a focus on sustainable development and environmental stewardship, as well as exchanging best practices for the development of human resources and industrial safety.

On October 17, 2014, Petróleos Mexicanos and Pacific Rubiales signed a memorandum of understanding to identify opportunities for collaboration in exploration and production activities, hydrocarbons transportation, electricity generation and the exchange of best practices for industrial safety training and health-at-work initiatives.

On October 26, 2014, Petróleos Mexicanos and Chevron signed a memorandum of understanding with the aim of establishing opportunities for cooperation in mutually beneficial projects related to deep water, heavy crude

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oil and the revitalization of mature fields, among other things. This memorandum of understanding also lays the foundation for collaboration in connection with natural gas production, refining and fuel distribution and carbon-dioxide emissions reduction.

On October 29, 2014, Petróleos Mexicanos, through PMI, and Kuwait Foreign Petroleum Exploration Company signed a memorandum of understanding to share technical and commercial information for the evaluation and development of joint business opportunities in oil and gas exploration and production, both in Mexico and abroad.

On October 30, 2014, Petróleos Mexicanos and Eni S.p.A., an Italian oil and gas company, signed a memorandum of understanding to identify opportunities for collaboration in exploration and refining activities, natural gas and petrochemical production, technological development, emissions reduction, as well as the exchange of best practices for the development of human capital.

On November 13, 2014, Petróleos Mexicanos and CNOOC, a Chinese state-owned oil and gas company, the China Development Bank and the Industrial and Commercial Bank of China signed memoranda of understanding which intend to, among other things, encourage cooperation among the parties with respect to technical, human resources and financial matters.

On December 4, 2014, Petróleos Mexicanos and Reliance Industries Limited, an Indian oil and gas company, signed a memorandum of understanding to collaborate in the development of new technologies and human resources. This memorandum of understanding also lays the foundation for collaboration and the possibility of joint business opportunities in exploration, production, refining and downstream activities.

On February 5, 2015, Petróleos Mexicanos and the *Instituto Politécnico Nacional* (National Polytechnic Institute) of Mexico entered into a collaboration agreement for the development of human resources, technology and research, with the aim of promoting and supporting joint research programs and the development of knowledge related to the hydrocarbons industry.

On February 18, 2015, Petróleos Mexicanos and the Organisation for Economic Co-operation and Development (OECD) signed a memorandum of understanding with the aim of benefiting from the OECD's knowledge of and experiences with international best practices relating to the procurement of goods and services.

On February 19, 2015, Petróleos Mexicanos signed a memorandum of understanding with the Infraestructura Energética Nova, S.A.B. de C.V. and Sempra LNG units of the U.S. energy company Sempra Energy for the potential joint development of a natural gas liquefaction project at the site of the Energía Costa Azul facility located in Ensenada, Mexico.

On April 7, 2015, Petróleos Mexicanos and First Reserve signed a memorandum of understanding and cooperation to explore new opportunities for joint energy projects, which would provide access to financing, as well as the exchange of technical and operational experience. This agreement contemplates up to U.S. \$1.0 billion of investments in potential projects relating to infrastructure, maritime transport and power cogeneration, among others.

On May 12, 2015, Petróleos Mexicanos and Global Water Development Partners, a company founded by private equity funds operated by Blackstone, signed a memorandum of understanding with the aim of creating a partnership to invest in water and wastewater infrastructure for Petróleos Mexicanos' upstream and downstream facilities. This partnership is intended to finance and carry out environmentally sustainable projects for water treatment in Petróleos Mexicanos' operations.

On May 12, 2015, PMX Cogeneración, S.A.P.I. de C.V., an affiliate of Petróleos Mexicanos, signed a memorandum of understanding with the consortium formed by Enel S.p.A., an Italian renewable energy company, and Abengoa, S.A., a Spanish renewable energy company, to develop a cogeneration power plant to generate and supply clean energy to the Antonio Dovali Jaime refinery in Salina Cruz, as well as the Mexican national grid.

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On June 1, 2015, Petróleos Mexicanos and the U.S. based global asset manager BlackRock Inc. signed a memorandum of understanding with the aim of accelerating the development and financing of energy-related infrastructure projects that are of strategic importance to Petróleos Mexicanos.

On July 20, 2015, Petróleos Mexicanos, through its Corporate Office of Procurement and Supply, signed an agreement with the OECD with the aim of adopting and promoting best practices in procurement and fostering efficient management strategies and transparency in Petróleos Mexicanos' processes. The agreement also contemplates the training of our personnel by the OECD on issues of transparency and ethics, the design of procurement procedures and mitigating risks of collusion.

On July 22, 2015, Petróleos Mexicanos and the *Secretaría de Desarrollo Agrario, Territorial y Urbano* (Ministry of Agriculture, Land and Urban Development) signed a collaboration agreement with the aim of establishing consulting and training mechanisms for the development of hydrocarbon exploration, extraction and distribution projects in strict observance of the applicable legal framework and with full respect for agricultural landowners.

On July 23, 2015, Petróleos Mexicanos and the Instituto Tecnológico y de Estudios Superiores de Monterrey, A.C. signed a collaboration agreement with the purpose of (1) fostering competitive development within the Mexican oil and gas industry; (2) carrying out specialized research and consulting services, including lectures, seminars, conferences and other events of common interest to the institutions; and (3) providing postgraduate studies for our employees and internships for college students at Petróleos Mexicanos.

On July 28, 2015, Petróleos Mexicanos and Banco Santander, S.A. (Santander) signed a collaboration agreement with the purpose of providing our franchisees with access to Santander banking services such as bank card sales, deposits and e-banking services, payroll management and the transportation of money.

On September 9, 2015, Petróleos Mexicanos and General Electric signed a memorandum of understanding with the aim of creating a partnership to invest in new technology and financing initiatives for gas compression, power generation and the production of hydrocarbons, both onshore and offshore, including in deepwater fields.

On October 7, 2015, Petróleos Mexicanos, through its subsidiary Pemex Cogeneration and Services, and Dominion Technologies signed a memorandum of understanding to form a company aimed at the joint implementation of cogeneration projects.

On October 10, 2015, Petróleos Mexicanos and the United Nations Development Programme in Mexico reaffirmed their commitment to use best practices in terms of inclusion, equality and non-discrimination in the workplace.

On November 30, 2015, Petróleos Mexicanos and Global Water Development Partners agreed to create a joint venture intended to invest approximately U.S. \$800 million in water and wastewater treatment infrastructure for upstream and downstream facilities in Mexico. This partnership aims to (1) provide access to advanced technology to meet the supply and treatment requirements of wastewater at our facilities, in both onshore and offshore production areas, as well as in refineries and petrochemical plants; and (2) in the future, to potentially implement and finance environmentally sustainable solutions for water management.

On January 19, 2016, Petróleos Mexicanos and Mubadala Petroleum signed a memorandum of understanding agreeing to joint projects to explore the Mexican energy sector, including its upstream activities, primary midstream activities and infrastructure projects for a total investment of approximately U.S. \$4.0 billion. Among these projects is a commercial logistic infrastructure system in the Salina Cruz, Oaxaca area, for an approximate investment in excess of U.S. \$3.0 billion.

On January 19, 2016, Petróleos Mexicanos and the Abu Dhabi National Oil Company signed a memorandum of understanding with the aim to share each company's best practices with respect to different upstream activities, including exploration, development and production in oil fields; improved recovery, handling and processing of liquefied natural gas; as well as human resources training, sustainability, internal controls, transparency, process development and cyber-security.

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On January 19, 2016, Petróleos Mexicanos and Saudi Aramco signed a memorandum of understanding renewing and strengthening the relationship between both companies and establishing an exchange of ideas surrounding operational excellence, sustainability and energy efficiency, and innovation and technological development.

These broad agreements of technological and scientific collaboration are strictly non-commercial, *i.e.*, there is no transfer of resources among the parties.

### **Property, Plants and Equipment**

#### *General*

Substantially all of our property, consisting of refineries, storage, production, manufacturing and transportation facilities and certain retail outlets, is located in Mexico, including Mexican waters in the Gulf of Mexico. The location, character, utilization and productive capacity of our exploration, drilling, refining, petrochemical production, transportation and storage facilities are described above. See “—Exploration and Production,” “—Drilling and Services,” “—Refining,” “—Gas and Basic Petrochemicals,” “—Petrochemicals,” “—Ethylene,” “—Fertilizers,” “—Logistics” and “—Cogeneration and Services.”

#### *Reserves*

Under Mexican law, all crude oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by us. The Mexican Government has granted us the right to exploit the petroleum and other hydrocarbon reserves assigned to us in connection with Round Zero. Productive state-owned companies and other companies participating in the Mexican hydrocarbons industry may report assignments or contracts and the corresponding expected benefits for accounting and financial purposes. See “Information on the Company—History and Development—Recent Energy Reform” above in this Item 4. Our estimates of hydrocarbon reserves are described under “—Exploration and Production—Reserves” above.

### **GENERAL REGULATORY FRAMEWORK**

Petróleos Mexicanos is regulated by the Mexican Constitution, the Petróleos Mexicanos Law and the Hydrocarbons Law, among other regulations. The purpose of the Petróleos Mexicanos Law is to regulate the organization, management, operation, monitoring, evaluation and accountability of Petróleos Mexicanos as a productive-state owned company of the Mexican Government. On October 31, 2014, the Regulations to the Petróleos Mexicanos Law were published in the Official Gazette of the Federation. These regulations were modified on February 9, 2015. The purpose of these regulations is to regulate, among other things, the appointment and removal of the members of the Board of Directors of Petróleos Mexicanos; potential conflicts of interest for Board members; and the evaluation of Petróleos Mexicanos.

The Mexican Government and its ministries regulate our operations in the oil and gas sector. The Ministry of Energy monitors our operations, and the Secretary of Energy acts as the chairperson of the Board of Directors of Petróleos Mexicanos. In addition, the Coordinated Regulatory Bodies related to the Energy Matters Law, which was enacted as part of the Secondary Legislation and took effect on August 12, 2014, establishes mechanisms for the coordination of these entities with the Ministry of Energy and other ministries of the Mexican Government. The NHC has the authority to award and execute contracts for exploration and production in connection with competitive bidding rounds. The Energy Regulatory Commission has the authority to grant permits for the storage, transportation and distribution of oil, gas, petroleum products and petrochemicals in Mexico, and to regulate the first-hand sale of these products. The regulatory powers of the NHC and the Energy Regulatory Commission extend to all oil and gas companies operating in Mexico, including Petróleos Mexicanos and the subsidiary entities.

On December 2, 2014, the Ministry of Energy published in the Official Gazette of the Federation a statement declaring that the new Board of Directors of Petróleos Mexicanos was performing its duties and the mechanisms for our oversight, transparency and accountability had been implemented in accordance with the Petróleos Mexicanos Law. As a result, the special regime that governs Petróleos Mexicanos’ activities relating to productive state-owned subsidiaries, affiliates, compensation, assets, administrative liabilities, budget, debt levels and the state dividend took effect. On June 10, 2015 the General Provisions for Contracting with Petróleos Mexicanos and its Productive State-Owned Subsidiaries were published in the Official Gazette of the Federation, and on June 11, 2015, the special regime for acquisitions, leases, services and public became effective. These general provisions were modified on January 27, 2016. Beginning in 2015, each year the Ministry of Finance and Public Credit provides us with estimated macroeconomic indicators for the following fiscal year, which we are to use to prepare the consolidated annual budget for Petróleos Mexicanos and the subsidiary entities, including our financing program. Upon approval by the Board of Directors of Petróleos Mexicanos, our consolidated budget and financing program is then submitted to the Ministry of Finance and Public Credit, which has the authority to adjust our financial balance goal and the ceiling on our wage and salary expenditures for the fiscal year.

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The consolidated annual budget and financing program of Petróleos Mexicanos and the subsidiary entities, including any adjustments made by the Ministry of Finance and Public Credit, is then incorporated into the federal budget for approval by the Chamber of Deputies. The Mexican Government is not, however, liable for the financial obligations that we incur. In approving the federal budget, the Chamber of Deputies authorizes our financial balance goal and the ceiling on our wage and salary expenditures for the fiscal year, which it may subsequently adjust at any time by modifying the applicable law.

The Superior Audit Office of the Federation, or the ASF, reviews annually the *Cuenta Pública* (Public Account) of Mexican Government entities, including Petróleos Mexicanos and the subsidiary entities. This review focuses mainly on the entities' compliance with budgetary benchmarks and budget and accounting laws. The ASF prepares reports of its observations based on this review. The reports are subject to our analysis and, if necessary, our clarification and explanation of any issues raised during the audit. Discrepancies in amounts spent may subject our officials to legal sanctions. However, in most instances, the observed issues are explained and clarified.

We are subject to Mexican and international anti-corruption, anti-bribery and anti-money laundering laws and regulations, as well as internal control procedures and guidelines designed to ensure our compliance with these laws.

As an issuer of debt securities that are registered under the Securities Act and in connection with certain representations and covenants included in our financing agreements, we must comply with the U.S. Foreign Corrupt Practices Act, or the FCPA. The FCPA generally prohibits companies and anyone acting on their behalf from offering or making improper payments or providing benefits to government officials for the purpose of obtaining or keeping business. In addition, we are subject to other international laws and regulations related to anti-corruption, anti-bribery and anti-money laundering, including the U.K. Bribery Act of 2010, which prohibits the solicitation of, the agreement to receive and the acceptance of bribes.

As a public entity of the Mexican Government, we are also subject to various domestic laws related to anti-corruption, anti-bribery and anti-money laundering. The *Código Penal Federal* (Federal Criminal Code) criminalizes certain corrupt practices, including bribery, embezzlement and abuse of authority. The *Ley Federal Anticorrupción en Contrataciones Públicas* (Federal Law of Anti-Corruption in Public Contracting) sanctions companies and individuals that violate this law while participating in federal government contracting in Mexico, as well as Mexican companies and individuals engaged in international commercial transactions. This law is analogous in many respects to the FCPA. In addition, the Federal Law of Administrative Responsibilities of Public Officials prohibits the bribery of federal public officials in Mexico, including members of the Mexican Congress and the federal judiciary.

We also employ internal control procedures and guidelines designed to monitor the activities of our employees, including senior management, and to ensure compliance with applicable anti-corruption, anti-bribery and anti-money laundering laws and regulations. The *Lineamientos que regulan el sistema de control interno en Petróleos Mexicanos, sus empresas productivas subsidiarias y empresas filiales* (Guidelines governing the internal control system of Petróleos Mexicanos, its productive subsidiary entities and affiliates) set forth the principles underlying our internal controls system and the procedures necessary for its implementation and monitoring. In addition, the *Lineamientos para la participación de testigos sociales durante actividades de procura y abastecimiento y procedimiento de contratación de Petróleos Mexicanos y sus empresas productivas subsidiarias* (Guidelines for the participation of public witnesses in the procurement and supply activities and contracting procedures of Petróleos Mexicanos, its productive subsidiary entities and affiliates), delineates the ways in which public witnesses may act as third-party observers in connection with our procurement procedures. These internal controls and guidelines are applicable to Petróleos Mexicanos and the subsidiary entities. For a description of the risks relating to anti-corruption, anti-bribery and anti-money laundering laws and regulations, see "Item 3—Key Information—Risk Factors—Risk Factors Related to our Operations—We are subject to Mexican and international anti-corruption, anti-bribery and anti-money laundering laws. Our failure to comply with these laws could result in penalties, which could harm our reputation and have an adverse effect on our business, results of operations and financial condition."



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On May 27, 2015 the *Decreto mediante el cual se reformaron, adicionaron y derogaron diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en materia de combate a la corrupción* (Decree that reformed, added to and repealed various provisions of the Political Constitution of the United Mexican States, related to combating corruption matters) was published in the Official Gazette of the Federation. According to this decree, the Mexican Congress will pass laws that establish, among other things, an anti-corruption national system to coordinate efforts among various government authorities to prevent, detect and punish corrupt activities and monitor and manage public resources. As of this date, the Senate is discussing proposals of this secondary legislation and once they are approved, they will be sent to the Chamber of Deputies for their discussion and approval.

## ENVIRONMENTAL REGULATION

### Legal Framework

We are subject to various laws related to the environmental protection of natural resources, as well as the management of hazardous and non-hazardous wastes. In particular, Petróleos Mexicanos and the subsidiary entities are subject to the provisions of the *Ley General del Equilibrio Ecológico y la Protección al Ambiente* (General Law on Ecological Equilibrium and Environmental Protection, which we refer to as the Environmental Law), and the regulations issued thereunder, the *Ley General de Cambio Climático* (General Law on Climate Change), and several technical environmental norms issued by the SEMARNAT. We are also subject to the *Ley General para la Prevención y Gestión Integral de los Residuos* (General Law on Waste Prevention and Integral Management), *Ley para el Aprovechamiento de Energías Renovables y el Financiamiento de la Transición Energética* (Law of Use of Renewable Energy and Financing of the Energy Transition), as well as the *Ley para el Aprovechamiento Sustentable de la Energía* (Sustainable Use of Energy Law). In addition, Petróleos Mexicanos and the subsidiary entities are subject to the environmental laws and regulations issued by the governments of each state of Mexico where our facilities are located.

The SEMARNAT, in conjunction with other Mexican federal and state authorities, regulates our activities that affect the environment. Before we carry out any activity that may have an adverse impact on the environment, we are required to obtain certain authorizations from the Hydrocarbons Industrial Safety and Environmental Protection Agency, the SEMARNAT, the Ministry of Energy and the Mexican Navy. In particular, environmental regulations apply to petrochemical, crude oil refining and extraction activities, as well as the construction of crude oil and natural gas pipelines. Before authorizing a new project, the Hydrocarbons Industrial Safety and Environmental Protection Agency requires the submission of an environmental impact analysis and any other information that it may request.

Pursuant to the Secondary Legislation, the Hydrocarbons Industrial Safety and Environmental Protection Agency was created as an administrative body of the SEMARNAT that operates with technical and administrative autonomy, has the authority to regulate and supervise companies participating in the hydrocarbons sector through its issuance of rules establishing safety standards, limits on greenhouse gas emissions and guidelines for the dismantling and abandonment of facilities, among other things. In accordance with the regulations published in the Official Gazette of the Federation on October 31, 2014, this agency began its activities on March 2, 2015. The provisional Article Five of the National Agency of Industrial Safety and Environmental Protection for the Hydrocarbons Sector Law provides that until the general administrative provisions and Official Mexican Standards proposed by the Hydrocarbons Industrial Safety and Environmental Protection Agency are in effect, obligations will continue under the guidelines, technical and administrative arrangements, agreements and Official Mexican Standards promulgated by the SEMARNAT, CNH and CRE. See “—Information on the Company—History and Development—Recent Energy Reform” above in this Item 4 for more information.

The environmental regulations specify, among other matters, the maximum permissible levels of emissions and water discharge. These regulations also establish procedures for measuring pollution levels.

Mexico generally reviews and updates its environmental regulatory framework every five years, and we participate with the Mexican Government in developing environmental regulations that are related to our activities. The Law of Use of Renewable Energy and Financing of the Energy Transition and the Sustainable Use of Energy Law are designed to further Mexico's transition to developing cleaner, more environmentally friendly fuels and renewable energy sources. On January 30, 2006, the SEMARNAT issued Official Mexican Standard NOM-086-SEMARNAT-SENER-SCFI-2005, which sets forth environmental specifications for fossil fuels.



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As required by this standard, we are currently developing projects at our refineries to satisfy domestic market demand for low-sulfur fossil fuels.

On March 19, 2010, the Energy Regulatory Commission issued Official Mexican Standard NOM-001-SECRE-2010, which specifies quality parameters for the transportation, storage and distribution of natural gas. In order to comply with this standard, we implemented procedures to control the nitrogen concentration in the natural gas that we process and installed equipment to monitor the quality of the natural gas that we transport, store and distribute. In addition, the cryogenic plant at the Ciudad Pemex GPC was modified to comply with this standard in December 2011 and three plants began operating in 2012 in order to control the liquid content of natural gas.

During 2015, we submitted comments to proposed Official Mexican Standard NOM-016-CRE-2016 that would specify environmental standards for fossil fuels. In anticipation of needing to comply with this standard, we are developing several projects at our refineries to produce low-sulfur fossil fuels. See “—Business Overview—Refining—Fuel Quality Project.” It is expected that this standard will be officially published within the fourth quarter of 2016.

On February 2, 2012, the SEMARNAT published an update of Official Mexican Standard NOM-085-SEMARNAT-2011 (which we refer to as NOM-085), which sets forth environmental standards regarding the maximum levels of emissions to the atmosphere allowed from stationary sources. In April 2012, NOM-085 was amended to heighten some of these standards.

In April 1997, the SEMARNAT issued regulations governing the procedures for obtaining an environmental license, under which new industrial facilities can comply with all applicable environmental requirements through a single administrative procedure. Each environmental license integrates all of the different permits, licenses and authorizations related to environmental matters for a particular facility. Since these regulations went into effect, we have been required to obtain an environmental license for any new facility. Our facilities that existed prior to the effectiveness of these regulations are not subject to this requirement.

The following important Official Mexican Standards also apply to us. Official Mexican Standard NOM-149-SEMARNAT-2006 delineates the environmental standards for all drilling, maintenance and abandonment of oil wells in the Mexican Marine Zones. Official Mexican Standard NOM-153-SEMARNAT-2011 establishes specifications for the injection of perforation cuttings. Finally, Official Mexican Standard NOM-115-SEMARNAT-2003 lists required procedure for drilling or performing maintenance on land oil wells for exploration and production while in agricultural areas or otherwise outside of protected lands.

On January 6, 1997, the SEMARNAT issued Official Mexican Standard NOM-001-SEMARNAT-1996 which, in conjunction with input from the *Comisión Nacional del Agua* (National Water Commission), which we refer to as CONAGUA, and the *Procuraduría Federal de Protección al Ambiente*, PROFEPA, sets forth the maximum levels of pollutants which can be discharged into national bodies of water.

Federal and state authorities in Mexico may inspect any facility to determine its compliance with the Environmental Law, local environmental laws, regulations and technical environmental regulations. Violations or non-compliance with environmental standards and regulations may result in the application of substantial fines, temporary or permanent shutdown of a facility, required capital expenditures to minimize the effect of our operations on the environment, cleanup of contaminated land and water, cancellation of a concession or revocation of authorization to carry out certain activities and, in certain cases, criminal prosecution of the individuals involved. See “Item 3—Key Information—Risk Factors—Risk Factors Related to Our Operations—Our compliance with environmental regulations in Mexico could result in material adverse effects on our results of operations.”

On November 28, 2007, the SEMARNAT issued NOM-148-SEMARNAT-2006 (which we refer to as NOM-148), that establishes standards for sulfur recovery in all refineries. As of the date of this report, all of our refineries are in compliance with NOM-148. NOM-148 is currently under review, and recent proposals include a requirement for continuous monitoring systems in all sulfur recovery plants.

As we increase our use of new drilling technologies, it is possible that Mexico’s environmental regulations will expand to address these developments. On January 11, 2011, the NHC issued new rules and regulations relating to our deep water drilling and exploration activities in the Gulf of Mexico.

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These new rules and regulations, which were promulgated in response to the Deepwater Horizon blowout and resulting oil spill that occurred on U.S. territory in the Gulf of Mexico in April 2010, require us to produce periodic reports on our safety measures for deep water drilling and exploration activities and to have our procedures certified by an independent expert. We must also certify that we have adequate insurance or other financial resources available to cover any losses or compensation claims stemming from a deep water accident. As of the date of this report, we are in compliance with the above requirements for projects at depths of 500 to 1,500 meters and with all requirements applicable to deepwater projects, which are issued primarily by the NHC. On February 20, 2012, the governments of the United States and of Mexico reached an agreement regulating oil and gas development along their maritime border in the Gulf of Mexico, which may facilitate an expansion of deep water drilling for Mexico. This agreement took effect on July 18, 2014, following approval by the relevant governmental authorities in each country. Under this agreement, Mexico is to retain its own regulatory system.

In November of 2015, the NHC also issued guidelines for presenting, approving and overseeing exploration and production plans. In particular, extraction development plans must include a chapter on industrial safety and environmental protection.

On May 14, 2012, we procured the services of Wild Well Control, Inc., a company that specializes in controlling oil spills, in order to comply with the rules and regulations issued by the NHC. Our initial agreement with Wild Well Control, Inc. expired on March 31, 2013 but was subsequently renewed and is in effect as of the date of this report.

We have also recently been producing natural gas located in shale deposits from the Emergente-1 well. Although this well was initially drilled through hydraulic fracturing, or “fracking,” we have since relied on horizontal drilling to produce natural gas. Accordingly, we have produced very little waste water. However, shale well drilling could result in environmental concerns in the future. Mexico does not currently have any environmental regulation specific to shale gas development. Our plan to continue drilling exploratory wells for the production of shale oil and gas in the north of Veracruz and the south of Tamaulipas has been approved, subject to CONAGUA’s approval of our water monitoring plan, among other requirements.

## **Global Climate Change and Carbon Dioxide Emissions Reduction**

On June 6, 2012, the General Law on Climate Change was published in the Official Gazette of the Federation, with the objectives of regulating greenhouse gas emissions and reducing the vulnerability of Mexico’s infrastructure, population and ecosystems to the adverse effects of climate change. In order to comply with the requirements of the General Law on Climate Change, we promote policies intended to reduce greenhouse gas emissions, such as reducing gas flaring and fugitive emissions, implementing reforestation projects and substituting liquid fuels for natural gas. We also undertake efforts to minimize the vulnerability of our operations to climate change.

The General Law on Climate Change establishes a series of financial, regulatory and technical rules and regulations, as well as tools for strategy formation, evaluation and monitoring that form the framework for a comprehensive public policy on climate change. The *Estrategia Nacional de Cambio Climático* (National Climate Change Strategy), *Programa Especial de Cambio Climático 2014-2018* (Special Climate Change Program for 2014-2018) and *Programas Estatales de Acción ante el Cambio Climático* (State Programs of Action Against Climate Change) represent some of the strategies that have been developed to combat climate change in Mexico in accordance with this policy. In addition, the General Law on Climate Change provides for tools to analyze and monitor greenhouse gas emissions, including the *Inventario de Emisiones de Contaminantes Atmosféricos* (Inventory of Emissions of Air Pollutants), *Inventario de Emisiones de Gases Efecto Invernadero* (Inventory of Greenhouse Gas Emissions), *Registro Nacional de Emisiones* (National Registry of Emissions) and *Sistema de Información sobre Cambio Climático* (Climate Change Information System). Finally, the *Fondo para el Cambio Climático* (Climate Change Fund) provides funds for climate change initiatives, while the Official Mexican Standards set forth the relevant environmental regulations.

We have identified several activities and projects to be undertaken in respect of the Special Climate Change Program for 2014-2018, including: the greenhouse gas emissions project, which aims to reduce emissions through energy efficiency, operational efficiency and the reduction of gas flaring; gas usage efficiency; carbon capture and storage associated with enhanced oil recovery processes; and projects with the Nationally Appropriate Mitigation Actions, or NAMA. Through our greenhouse gas emissions measures, we aim to reduce our emissions by 5.0 million tons of carbon dioxide equivalent by 2019.

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We have taken the following actions aimed at mitigating the impact of climate change:

- implementing energy efficient practices;
- reducing gas flaring and venting to reduce losses in the extraction process and distribution system and to ensure gas usage efficiency; and
- advancing efficient cogeneration of electric energy.

By the end of 2015, Petróleos Mexicanos, along with nine other oil and gas companies, signed a Joint Collaborative Declaration under the Oil and Gas Climate Initiative in Paris that reaffirmed our commitment to reduce greenhouse gas emissions. Together, the signing companies supply 10% of the world's energy. We have also continued our collaboration with the Global Methane Initiative, the Global Gas Flaring Reduction Partnership of the World Bank and the Climate and Clean Air Coalition Oil and Gas Partnership under the United Nations Environment Programme to reduce the emissions of short lived climate pollutants, such as methane and black carbon), that have particularly high impacts on global warming. In 2014, we proposed developing 16 highly profitable and replicable projects which would reduce greenhouse gases.

We are also actively involved in the Mexican Government's efforts to implement its Carbon Capture, Utilization and Storage Technology Roadmap (CCUS). With international support from the World Bank, the Government of Japan and the Government of United States of America, we work to build our capacity for carbon capture and storage methods and to develop and implement a pilot CCUS project.

In addition, we have taken steps to ensure that our land use practices conform with the guidelines set forth in the General Law on Climate Change and the *Programa de Ordenamiento Ecológico del Territorio* (Ecological Territorial Regulation Program), and to protect, conserve and restore the ecosystems that have been impacted by our operations. We have also assisted in the development of the *Atlas Nacional de Riesgos* (National Risk Atlas), to identify the risks associated with climate change in Mexico in order to best mitigate the climate effects of our operations.

In 2014, we conducted a study on climate change adaptation to estimate the vulnerability of our facilities in different regions in Mexico. During 2015, we used the results of this study to help inform and update our Environmental Strategy.

On October 28, 2014, the *Reglamento de la Ley General de Cambio Climático en Materia del Registro Nacional de Emisiones* (Regulations to the General Law on Climate Change Relating to the National Registry of Emissions) was published. Pursuant to these regulations, we are required to calculate and report to the SEMARNAT, on an annual basis, the amount of our direct and indirect greenhouse gas emissions after such information has been verified by an approved third party. In compliance with this regulation, Petróleos Mexicanos reported its greenhouse gases emissions through the Annual Operating Permit, the organization which establishes the calculation methodologies and emission factors for the oil and gas sector.

During 2015, we recorded greenhouse gas emissions of approximately 52.1 million tons of carbon dioxide equivalent, which represented a 6.3% decrease as compared to the amount emitted in 2014. This decrease was primarily due to a reduction in the emissions from combustion equipment in our Minatitlán, Salamanca and Cadereyta refineries and in the Cantarell business unit. Our gas usage level was 93.2% during 2015, as compared to 96.2% in 2014, which represents a deviation from the gas usage standards set forth in the NHC's rules and regulations. This deviation from the NHC's gas usage standards was mainly due to reservoir behavior, the residual gas volume used in artificial system gas pumping and to budget adjustments that delayed programmed works to improve gas usage. We have proposed certain steps to help meet the NHC's gas usage standards in our 2016 exploration plan.

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In 2015, Petróleos Mexicanos further developed its PEMEX Environmental Strategy 2016-2020, which incorporates our former *Plan de Acción Climática* (Climate Action Plan) that had been in operation since 2013. This environmental strategy identifies courses of action, projects and operative practices that we can implement in order to mitigate our effect on climate change. Additionally, the General Law on Climate Change requires us to work together with other sectors, authorities and civil associations, to lead efforts in developing effective solutions to climate change risks.

We have several conservation and reforestation projects designed to support our greenhouse gas emissions project, preserve the ecosystems in which we operate, protect the surrounding communities and promote social development. Our biodiversity conservation efforts and indirect mitigation measures have been carried out through the following projects:

- conservation, management and restoration of the Usumacinta River basin's natural ecosystems in the state of Chiapas;
- carbon capture for biodiversity conservation at the Jaguarundi Ecological Park in the state of Veracruz;
- an environmental education program and the operation of a water house in the Centla swamps located in the state of Tabasco;
- environmental education programs and reforestation of protected natural areas in the Gulf of Mexico;
- forestry restoration in protected natural areas in the Gulf of Mexico;
- operation of the protected natural area of Tuzandépetl in the state of Veracruz;
- operation of the Castaño ecological reserve in the state of Tabasco; and
- monitoring the effect of climate change on fields in Calakmul in the state of Campeche.

We understand that climate change is a complex challenge that needs to be addressed using a multi-faceted approach that incorporates different areas of the company. Towards that end, we presented our progress on climate change measures in our report to the Carbon Disclosure Project (CDP), a not-for-profit organization that works with large corporations to disclose greenhouse gas emissions. We earned a score of 84 out of 100 points on our report, an 11 point improvement from 2014.

### *Clean Development Mechanism Projects, NAMAs, Carbon Markets and Green Bonds*

In 2000, Mexico ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change (which we refer to as the Kyoto Protocol) as a non-Annex B country. Accordingly, Mexico is not subject to emission caps under the Kyoto Protocol, but Mexican companies, such as PEMEX, are allowed to develop Clean Development Mechanism (CDM) projects. These CDM projects generate carbon dioxide emission-reduction certificates or credits that can be traded in international markets. We have two registered CDM projects with the United Nations Framework Convention on Climate Change: Waste Energy Recovery at the Dos Bocas Marine Terminal, which increases thermal efficiency by recovering wasted heat for the Maya oil dewatering process, and Tres Hermanos Oil Field Gas Recovery and Utilization Project, which involves the recovery and transportation of gas from oil wells that used to be flared from oil batteries to a new carbon dioxide separation and gas conditioning plant, where dry gas and condensates are produced. Emissions reductions resulting from these two projects will be verified by a third party recognized by the United Nations.

We are currently providing comments to the American Carbon Registry to help develop a methodology to account for reduced emissions when replacing fuel oil with natural gas in refineries. We are also working to implement the Climate Action Reserve's Mexico Boiler Efficiency Project Protocol, which develops a standardized carbon offset project protocol for industrial boiler efficiency upgrades in Mexico. This protocol contemplates the purchase and sale of emissions reductions, which may enable the creation of a Mexican or North American carbon market.

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As of January 1, 2014, Petróleos Mexicanos has paid a fossil fuel tax pursuant to the IEPS. Once the Ministry of Finance and Public Credit issues its relevant rules and regulations, we anticipate being able to pay the IEPS with carbon certificates. During 2015, we encouraged the Ministry of Finance and Public Credit to expedite its issuance of such rules, but none have been issued as of the date of this report.

In 2015, Petróleos Mexicanos' Institutional Project Development System added climate change mitigation and adaptation to its environmental requirements for project development and implementation.

The Inter-American Development Bank (IDB) has selected Mexico to participate in a pilot project in which energy service companies will be funded through the IDB's issuance of green bonds. The proceeds of these issuances will be used for projects related to energy efficiency and initiatives aimed at mitigating climate change. As of the date of this report, Petróleos Mexicanos has been chosen to participate in this pilot project and is in the process of selecting projects that will be financed initially by a line of credit. The IDB has approved the ECON-PEMEX Green Bond Securitization Program for U.S. \$400 million, an amount which may be increased to up to U.S. \$500 million. Once formally granted, the revolving credit line will be used to finance a portfolio of climate change and efficiency projects developed by ECON Soluciones Energéticas Integrales, S.A.P.I. de C.V. and carried out in our facilities. This project is still being analyzed by us, and we expect it will be implemented in upcoming years.

### **PEMEX's Internal Monitoring**

We believe that we are in substantial compliance with all current federal and state environmental laws as those laws have been historically interpreted and enforced. We maintain an internal structure designed to identify and solve environmental problems, and we retain external consultants to perform operational audits at our industrial plants, including cost estimates for remedying any shortfall in compliance with Mexican environmental laws. Such remedies may include improvements of our operating efficiency, cleaning of contaminated land and water and capital expenditures to minimize the impact of our operations on the environment. In addition, the subsidiary entities have specialized departments that, depending on the size and geographic distribution of their respective facilities, implement their own environmental programs and conduct internal environmental audits and inspections of their sites and their immediate surroundings, based on the standards of the Hydrocarbons Industrial Safety and Environmental Protection Agency. When these internal audits reveal problems or deficiencies, the subsidiary entities take the necessary remedial actions to eliminate them. We record in our financial statements as environmental liabilities the estimated cost of remediation requirements.

In addition to our internal monitoring structure for identifying environmental compliance issues, Petróleos Mexicanos and the subsidiary entities' environmental program is subject to the review of the Hydrocarbons Industrial Safety and Environmental Protection Agency. This agency administers the Mexican environmental regulatory framework for the hydrocarbons sector and establishes acceptable standards of environmental remediation. Although the Hydrocarbons Industrial Safety and Environmental Protection Agency has the authority to review and inspect our remediation efforts and our compliance with permitted contamination levels, it does not determine our environmental liabilities. We maintain proper records of all of the studies, estimates, performed works and any other information that the Hydrocarbons Industrial Safety and Environmental Protection Agency may request from time to time.

Since 1993, we have participated in the National Program of Environmental Auditing, a voluntary environmental audit program, with PROFEPA and now, with the Hydrocarbons Industrial Safety and Environmental Protection Agency. This program was created by PROFEPA in 1992 as a regulatory incentive for companies to correct any environmental irregularity in their operations in a voluntary manner. The voluntary environmental audit consists of three stages: (1) an audit and compliance diagnosis; (2) the development of an action plan to correct irregularities; and (3) the execution of the action plan. If a company completes the three stages in a satisfactory manner, the Hydrocarbons Industrial Safety and Environmental Protection Agency will provide them with a clean industry certificate, which means it complies with the applicable environmental legislation of their industry. As each environmental audit is completed, the audit report (which includes the estimated costs for remedying any environmental issues) is sent to the Hydrocarbons Industrial Safety and Environmental Protection Agency for its review and approval. If the audit report is approved by the Hydrocarbons Industrial Safety and Environmental Protection Agency, it is reviewed to determine which findings can be resolved by changing current plant or drilling operations and implementing the current capital expenditures plan.

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As of December 31, 2015, we were in the process of auditing 791 facilities, with the objective of obtaining “clean industry” certificates for each facility. In 2014, 331 facilities were certified, while the 2015 audits resulted in the certification of 73 facilities, of which 49 were re-certified and 24 were certified for the first time. In total, 404 of our facilities have obtained “clean industry” certificates. The audits of the remaining 387 facilities have begun, but are still under review. We will continue including new facilities under this program as we expand our activities in the areas of exploration, exploitation, refining and distribution of hydrocarbons.

During 2015, Petróleos Mexicanos experienced one major incident that had significant environmental consequences. On April 12, 2015, an oil spill occurred following the illegal tapping of the crude oil pipeline that runs from Bateria Agave to Entronque Sitio Grande. The oil drained into the Teapa River and subsequently into the Grijalva River, affecting the pumping and purification water plants supplying the City of Villahermosa. As a result of this spill of 1,100 liters, 14,000 square meters of surface area were affected and the iridescence covered 30 kilometers of the river bank.

In addition, Petróleos Mexicanos experienced the following material blasts or hazardous events at our facilities during 2015, none of which had significant environmental consequences:

- On August 11, 2015, a fire broke out following an explosion in the Escobedo-Santa Catarina pipeline located in the municipality of García in Nuevo León. The fire was caused when equipment belonging to a private company working at a construction site outside of our facilities collided into the pipeline. Pipeline valves were shut off to control the fire. As a result of the fire, five of the private company’s workers were killed.
- On August 27, 2015, a fire occurred during dismantling activities at the Abkatún-A Permanente processing platform in the Gulf of Mexico that activated the safety systems, procedures and protocols. In order to limit the effects of this accident, we evaluated all personnel working at the Abkatún-A Process Complex, dispersed hydrocarbon products iridescence over the sea surface and installed 49 mechanical isolation devices. One worker died and another was injured as a result of this fire. The root cause analysis identified a lack of risk identification and planning activities as the main causes of this accident.
- On October 27, 2015, a gas leak was produced at the alkylation plant of the Madero refinery. The leak came through where a temporary clamp had been installed. As a result of the fluorhydric gas leak, the plant was shut-off, the emergency plan was activated and personnel were evacuated. No workers were injured.
- On October 31, 2015, an accident occurred at the refinery of Minatitlán when contractors were handling catalyst under nitrogen atmosphere at catalytic reactor R-11002. Two contractors lost their lives as a result of this accident. The root cause analysis identified lack of supervision and poor application of critical procedures as the main causes of this accident.
- On November 24, 2015, a fire occurred at the Alkylation Plant at the Salina Cruz refinery due to a hydrocarbon leak following the rupture of a nozzle. As a result of this incident, two contractors and one worker were injured.

In addition, Petróleos Mexicanos experienced seven major incidents during 2015 that did not have significant environmental consequences:

- On January 5, 2015, a fire at the solaire area of Akal C8 platform located at the Northeast Marine region of the Gulf of Mexico injured three contractors. One contractor lost his life after several weeks in critical care. The fire occurred when contractors were removing a temporary beam at the same time that a turbo compressor, which was emitting exhaust into the area, was being tested. The root cause analysis identified poor risk evaluation and lack of coordination between the operations and maintenance groups as the main causes of the accident.

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- On February 18, 2015, a fire at the pyrolysis furnace BA-108 of the ethylene plant of the Cangrejera Petrochemical Complex damaged furnace piping, but did not injure any workers. This accident was caused by the liquids on the ethane load coming from another fractioning plant complex, as well as a lack of a liquid separator. The root cause analysis identified a poor application of operating procedures as the main cause of the incident.
- On April 1, 2015, a fire occurred at the processing platform of Abkatún-A-Permanente, located in the Gulf of Mexico. As a result, the safety systems, procedures and protocols were activated, and the platform was evacuated. The fire was extinguished shortly thereafter. In order to mitigate the effects of this incident, all of the personnel working at the Abkatún-A Process Complex were safeguarded, we mechanically dispersed hydrocarbon product iridescence over the sea surface and we installed 49 mechanical isolation devices around the area. As a result of this accident, seven workers died and the platform was destroyed.
- On May 5, 2015, during positioning operations of the drilling platform vessel Troll Solution, which is owned by Typhoon Offshore, at Abkatún-Pol-Chuc, the leg of the platform suddenly immersed in the sea bedding, tilting the platform and hitting the nearby Caan-A structure. As a result, the safety systems, procedures and protocols were activated, and the platform was evacuated. Two workers died and ten were injured as a result of this accident. The owner of the platform is performing a root cause analysis and is also working to remove the damaged platform.
- On June 22, 2015, an accident occurred at the Akal-H platform located off the coast of the state of Campeche as a result of an oil and gas leak. The safety systems, procedures, and protocols were activated. Three workers performing routine maintenance inspections were evacuated from the platform, and no injuries were reported. The platform, which is located in the Akal field of the Cantarell project, is uninhabited and operated remotely. As of the date of this report, we are still assessing the accident's impact on crude oil production.
- On June 30, 2015, an electric failure on a 480 volts Bus during a pump testing occurred at the refinery of Minatitlán, producing recirculation through the V-1904 separator to the TV-241 storage tank. As a result of the recirculation to the storage tank, a primary gasoline emanation occurred, intoxicating eight workers with hydrogen sulfide acid.
- On December 27, 2015, one worker died due to hydrogen sulfide acid intoxication while performing measurement tasks on the dehydrator tank TD-1 of the Sunupa Separation Battery in the State of Chiapas.

On April 20, 2016, an explosion occurred at the PMV Clorados III plant of PMV in Coatzacoalcas, Veracruz, which was operated by Mexichem and co-owned by us. As of the date of this annual report, 32 people have been confirmed dead and over 130 injured. The root cause analysis to determine the primary cause of the explosion remains underway.

In order to protect itself from environmental liabilities, Petróleos Mexicanos maintains insurance covering most of the expenses directly related to such incidents. However, this insurance does not cover fines, public relations expenses and site clean-up not directly related to the incident, among other expenses.

Other than as disclosed in this report, there are currently no material legal or administrative proceedings pending against us with respect to any environmental matters.

In an effort to create a culture focused on improving industrial safety, health and environmental protection, as well as to strengthen safety standards, we developed the PEMEX Safety, Health and Environmental Protection System (which we refer to as the SSPA). This system, which we began to implement in January 2006, is a management tool that has improved our identification, evaluation and continuous application of preventive measures related to industrial safety, health and environmental protection. The SSPA is based on international best practices and is designed to help us promote the continual improvement of our safety, health and environmental protection performance in order to achieve our goal of zero incidents, occupational health issues, injuries and emissions of pollutants in all of our operations. The objectives of the SSPA include:

- reinforcing process safety management, with a strong emphasis on the mechanical integrity of our plants and facilities;

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- upgrading the root cause methodology for analyzing incidents;
- improving environmental protection and occupational health policies;
- rigorously applying internal critical safety procedures;
- improving the preventive safety observation program (also known as effective audits);
- upgrading emergency response plans;
- implementing effective preventive health tests; and
- improving preventive safety risk assessment and job-task safety analysis.

In January 2011, the Ministry of Energy issued official guidelines regarding the implementation of Health, Safety and Environment Management Systems, which we refer to as Management EH&S, with which we must comply. In response, we introduced a program to comply with these guidelines and took a series of actions, including implementing preventive and reactive process safety management indicators. These indicators are based on the API's Recommended Practice 754, which establishes process safety performance indicators for the refining and petroleum industries. During 2015, the preventive safety management indicators and reactive indicators were continuously monitored in order to develop effective safety strategies for our critical installations.

In 2015, our lost time injury rate increased 23.7 % from 0.38 in 2014 to 0.47 in 2015. The segments that contributed most to this increase were our refining segment with a 51.7% increase, our exploration and production segment with a 31.4% increase and our petrochemicals segment with a 30.0% increase, as compared to our 2014 lost time injury rate. Partially offsetting these results, our gas and basic petrochemicals segment decreased its lost time injury rate by 62.5% in 2015 as compared to 2014. Our lost days indicator due to injuries increased from 25 to 31 lost days per million man hours worked with risk exposure from 2014 to 2015. Lost days are those missed as a result of incapacitating injuries suffered at work or those on which compensation is paid for partial, total or permanent incapacity or death. From 2014 to 2015, our contractors' lost time injury rate increased from 0.33 to 0.44 injuries per million man hours worked with risk exposure.

In order to decrease our number of accidents, we have established the "*Binomio*" (Audit-Advisory Plan) project. This new program seeks to align our strategies, increases accountability and includes 12 zero-tolerance EH&S guidelines. We have also run EH&S campaigns to decrease moderate and minor accidents. These campaigns focus on promoting a culture of safety and reducing accidents by better identifying risks, preventing slips and falls, providing additional lessons on how to handle objects and instructing on better planning and job scheduling. We have also used the *Binomio* program with our contractors to identify companies that have had fatal and/or serious accidents in the previous year to avoid entering into contractors with companies that perform poorly on the EH&S guidelines.

In 2015, we also hired a consulting firm to assist in the evaluation, development and execution of a general EH&S campaign, a risk detection campaign and a safety barriers campaign. We have seen continued success from our 2013 safety campaign, including a 25.0% decrease in the number of falls from heights, 14.2% decrease in the number of electrical maintenance jobs, and 31.5% decrease in the number of mechanical maintenance activities in 2015. In addition, two more guidelines were established to support the SSPA.

Our ongoing efforts to build a proactive culture in reporting and decision making resulted in a 95.9% report compliance rate in 2015. We also completed training and certification programs in hazard and functional safety analysis during 2015, with 111 employees passing either one or both of the certification programs. As part of our promotion of occupational health matters, 64 workers also received training and certifications as professional hygienists.



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[Table of Contents](#)**Environmental Liabilities**

At December 31, 2015, our estimated and accrued environmental liabilities totaled Ps. 3,521.8 million. Of this total, Ps. 819.7 million belong to Pemex Exploration and Production and, Ps. 2,702.1 million to Pemex Industrial Transformation. The following tables detail our environmental liabilities by subsidiary entity and operating region at December 31, 2015.

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[Table of Contents](#)**Pemex Exploration and Production<sup>(1)</sup>**

	<b>Estimated Affected Area</b> <b>(in hectares)</b>	<b>Estimated Liability</b> <b>(in millions of pesos)</b>
Northern region	98.90	Ps. 531.6
Southern region	89.84	141.9
<b>Total<sup>(2)</sup></b>	<b>188.74</b>	<b>Ps. 673.5</b>

Note: Numbers may not total due to rounding.

- (1) Includes all liabilities of Pemex-Exploration and Production that were assumed pursuant to our recent corporate reorganization.  
(2) During 2015, environmental remediation was completed on 29.9 hectares. There were 48.6 hectares of additional affected areas in 2015, the total corresponds to the Southern Region, as a result of spills from pipelines mainly.

Source: PEMEX.

	<b>Holding Ponds Drainage</b>	
	<b>Number of Holding Ponds</b> <b>Reported as Liabilities<sup>(1)</sup></b>	<b>Estimated Liability</b> <b>(in millions of pesos)</b>
Southern region	12	Ps. 21.3
Northern region	74	124.9
Total	86	146.2
<b>Total estimated environmental liabilities of Pemex Exploration and Production</b>		<b>Ps. 819.7</b>

Note: Numbers may not total due to rounding.

- (1) At December 31, 2014, we reported 88 holding ponds as liabilities. In 2015, there were 5 additional holding ponds, while 7 holding ponds were restored and the related liabilities were discharged. As a result, at December 31, 2015, 86 ponds remained to be reported as liabilities.

Source: Pemex Exploration and Production.

**Pemex Industrial Transformation<sup>(1)</sup>**

	<b>Estimated Affected Area</b> <b>(in hectares)</b>	<b>Estimated Liability</b> <b>(in millions of pesos)</b>
Refineries	273.43	Ps. 2,055.7
Burgos Gas complex processors (named Reynosa Gas complex processor)	11.52	19.6
Texistepec Mining Ex-Unit <sup>(2)</sup>	370.91	626.8
Cangrejera petrochemical complex <sup>(3)</sup>		
<b>Total estimated environmental liabilities of Pemex Industrial Transformation</b>	<b>655.9</b>	<b>2,702.1</b>

Note: Numbers may not total due to rounding.

- (1) Includes liabilities of Pemex-Refining, Pemex-Gas and Basic Petrochemicals and Pemex-Petrochemicals, which were assumed by Pemex Industrial Transformation as part of our recent corporate reorganization.  
(2) Pemex Industrial Transformation, as jointly responsible for the remediation of environmental liabilities attributable to its subsidiary Terrenos para Industrias, S.A., has accrued an environmental liability totaling Ps. 626.8 million at December 31, 2015 in connection to the Texistepec Mining Ex-Unit.  
(3) During 2015, were excluded 0.34 hectares, confirmed by the environmental authority, which resulted in the adjust to zero the environmental liabilities in Cangrejera petrochemical complex for 2015.

Source: Pemex Industrial Transformation.

Our estimates of environmental liabilities include cost estimates for site-specific evaluation studies, which draw upon aspects of previous evaluations for sites with comparable characteristics and the corresponding remediation. The remediation sites consist of facilities identified in the audit process described above, as well as those previously identified sites in more mature petroleum operating areas that were not cleaned up in the past. Our environmental liabilities also include the elimination of holding ponds created by abandoned petroleum wells.

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Additionally, our environmental liabilities include an accrual based on information received periodically from field managers regarding probable environmental liabilities identified in their respective areas of responsibility. We accrue environmental liabilities when sufficient basic knowledge is available to form a preliminary estimation as to remediation cost. Although the full potential scope of the remediation cost may not be known with certainty, these accruals are made when the liability is probable and the amount may be reasonably estimated, in accordance with IAS 37 “Provisions, Contingent Liabilities and Contingent Assets” for IFRS purposes. These estimated liabilities include assumptions resulting from an initial evaluation of damage, including land acreage to be remediated, depth and type of contamination. While the initial evaluation is extensive, there is a possibility that the actual scope of remediation could vary depending upon information gathered during the remediation process. For a further discussion of our environmental liabilities, see Note 3(k) to our consolidated financial statements included herein.

Unasserted or additional claims are not reflected in our identified liabilities. We are not aware of any such claims that would be of such magnitude as to materially affect our estimates of environmental liabilities. At the end of 2015, we were not aware of uncertainties with respect to joint and several liabilities that could affect our assessment of environmental contingencies or otherwise result in a major environmental liability. See “—History and Development—Recent Energy Reform” above in this Item 4 for more information regarding the participation of other companies in the Mexican energy sector. As a result, we believe we are positioned to know immediately of any claims and are therefore directly accountable for any claims that may be brought against us.

Pemex Exploration and Production remains responsible for handling existing environmental liabilities—these responsibilities are not part of the Integrated E&P Contracts. Nevertheless, the Integrated E&P Contracts include environmental clauses related to contractors’ and Pemex Exploration and Production’s responsibility to ensure an adequate environmental performance, and also establish the terms for compensation and repair of any new environmental impacts.

The timing of remediation or cleanup of the sites to which these environmental liabilities relate is dependent upon the annual budget approved by the Mexican Congress.

### **Environmental Projects and Expenditures**

In 2015, we spent approximately Ps. 9,918 million on environmental projects and related expenditures, as compared to Ps. 9,297 million in 2014. For 2016, we have budgeted Ps. 6,511 million for environmental projects and expenditures, including modernization of installations, implementation of systems and mechanisms to monitor and control atmospheric pollution, acquisition of equipment to address contingencies related to hydrocarbon spills, the expansion of water effluent systems, restoration and reforestation of affected areas, studies for environmental investigation and environmental audits. In addition, we continue to conduct extensive research and development efforts to increase our capacity to produce gasoline, diesel and fuel oil with lower sulfur content at our refineries in Mexico.

We do not believe that the cost of complying with environmental laws or environmental requirements related to the North American Free Trade Agreement (NAFTA) among the governments of Mexico, the United States and Canada, the Vienna Convention for the Protection of the Ozone Layer, the Agreement on Environmental Cooperation between the Governments of Mexico and Canada or Mexico’s membership in the Organization for Economic Cooperation and Development, has caused or will cause a significant increase in our environmental expenditures.

### **Social Responsibility**

Petróleos Mexicanos has implemented various initiatives in the area of corporate social responsibility, primarily with respect to the protection and preservation of the environment, relations with communities where we operate, ethical work practices, respect for labor rights and the general promotion of quality of life for communities and employees. Our corporate and social responsibility goals are carried out through the following mechanisms:

- mutually beneficial public works and investment projects;
- cash donations;

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- donations of fuels and asphalt;
- environmental protection projects;
- the *Programa de apoyo a la comunidad y medio ambiente* (Program to support communities and the environment, which we refer to as PACMA), which supports and implements social programs, actions and public works designed to promote the economic and social development of the communities in which we operate and to protect their environment; and
- other instruments that provide a positive impact our community, including our Integrated E&P contracts, FPWCs and the sustainable development annexes to our contracts in which we and our contractors commit to improving the quality of life in communities where we operate.

The total value of our donations and contributions amounted to Ps. 3,142.7 million in 2015. Our cash and donations amounted to approximately Ps. 351.0 million and our asphalt and fuel donations amounted to approximately Ps. 1,611.1 million. Contributions made through provisions of our Integrated E&P Contracts, FPWCs and SD Annexes amounted to Ps. 687.3 million, and PACMA and mutual benefit project contributions amounted to Ps. 196.3 million and Ps. 297.0 million, respectively. Approximately 70.5% of our donations and contributions were directed to the states most affected by our operations (Campeche, Tabasco, Tamaulipas and Veracruz), 24.6% to the states with medium levels of impact (Chiapas, Coahuila, Guanajuato, Hidalgo, Nuevo León, Oaxaca, Puebla and San Luis Potosí) and 4.9% to the remaining states. Most importantly, we took the following specific actions in 2015:

- contributed approximately Ps. 198.3 million to the construction of a section of the highway Boquerón del Palmar and Av. Paseo del Mar, Ciudad del Carmen Campeche;
- contributed approximately Ps. 131.8 million to the construction of a wastewater treatment plant and the rehabilitation of the sanitary sewer infrastructure for the municipality of San Fernando;
- contributed approximately Ps. 80.0 million to the construction of the Alonso Felipe de Andrade public market in Ciudad del Carmen, Campeche;
- contributed approximately Ps. 64.9 million to acquire and rehabilitate potable water equipment in San Fernando, Tamaulipas;
- contributed approximately Ps. 38.0 million towards supporting the operations of a Mobile Medical Unit in the State of Tabasco that provided 52,000 people with free medical, dental and ophthalmological care;
- contributed approximately Ps. 35.0 million towards improving infrastructure for fishery communities of the municipality of Carmen, Campeche;
- contributed approximately Ps. 29.0 million to four schools and shelters in Oaxaca for indigenous youth, through the “*Albergues y Comedores Escolares Indígenas*” (Indigenous Shelters and Food Banks) of the *Comisión Nacional para el Desarrollo de los Pueblos Indígenas* (National Commission for the Development of Indigenous Peoples);
- contributed approximately Ps. 23.4 million towards the construction of 19 domes and carports in Tabasco that allow students and teachers to engage in outdoor activities;
- contributed approximately Ps. 24.6 million towards the rehabilitation of 9.5 km of roads in the municipalities of Macuspana and Jalpa de Méndez in the state of Tabasco;
- contributed approximately Ps. 20.0 million towards the construction of a linear park and bike track on our pipelines in the municipalities of Altamira and Ciudad Madero in the state of Tamaulipas;

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- contributed approximately Ps. 15.2 million in 1,271,000 liters of magna gasoline to marine fisheries;
- contributed approximately Ps. 10.6 million to participate in the *Limpiemos Nuestro México Program* “*Carmen Orgullosamente Limpia*,” the country’s largest garbage collection in the streets, beaches, estuaries and mangroves;
- contributed approximately Ps. 9.0 million to neighborhood parks as part of the Mexican Government’s National Programme for Social Prevention of Violence and Crime;
- contributed approximately Ps. 6.0 million to the *Programa nacional de becas y financiamiento* (National scholarship program) of the *Universidad Nacional Autónoma de México* to assist students seeking jobs in science, technology and engineering; and
- contributed approximately Ps. 2.2 million by donating three tractors to the Producers Alliance of Agrarian Communities composed of the Municipality of Santa María Mixtequilla, the Municipality of Tehuantepec and Mixtequilla.

## **TRADE REGULATION AND EXPORT AGREEMENTS**

Though Mexico is not a member of Organization of the Petroleum Exporting Countries (which we refer to as OPEC), it has periodically announced increases and decreases in our crude oil exports reflecting production revisions made by other oil producing countries, in order to contribute to crude oil prices stabilization. However, we have not changed our export goals because of announcements made by OPEC since 2004, and we believe that Mexico has no current plans to change our current level of crude oil exports.

NAFTA has not affected Mexico’s rights, through us or other companies, to explore and exploit crude oil and natural gas in Mexico, to refine and process crude oil and natural gas and to produce petrochemicals in Mexico. Since 2003, petrochemical products have enjoyed a zero tariff under NAFTA and, subject to limited exceptions, exports of crude oil and petroleum products from Mexico to the United States and Canada have been free or exempt from tariffs. Similarly, since 2003, Mexico’s imports of petroleum products from the United States and Canada have also been exempt from tariffs. In addition, in 2004, NAFTA approved lower tariffs on certain materials and equipment imported by Mexico. The zero tariff on Mexico’s imports of petrochemicals from the United States and Canada could have increased competition in the petrochemicals industry in Mexico. To the extent that domestic and international prices for our products remain constant, lower tariffs on products, materials and equipment that we import from and export to the United States and Canada, reduce our expenses and increase our revenue.

## **TAXES, DUTIES AND OTHER PAYMENTS TO THE MEXICAN GOVERNMENT**

### **General**

Taxes and duties applicable to us are a significant source of revenues to the Mexican Government. We contributed approximately 30.4% of the Mexican Government’s revenues in 2014 and 21.0% in 2015. In 2015, we paid a number of special hydrocarbon taxes and duties, in addition to the other taxes and duties paid by some of the subsidiary companies, as described below under “—Other Taxes.” The fiscal regime in effect for *Petróleos Mexicanos* and the subsidiary entities for 2015 (which we refer to as the 2015 fiscal regime) became effective in 2016 and can be subsequently modified from time to time. The Secondary Legislation published in August 2014 set forth a fiscal regime applicable to the new contractual arrangements that governs exploration and production activities conducted in Mexico beginning on January 1, 2015, as well as a new state dividend to be paid by *Petróleos Mexicanos* and the subsidiary entities beginning on January 1, 2016. See “—Fiscal Regime” and “—Other Payments to the Mexican Government” below.

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**Fiscal Regime for PEMEX***Fiscal Regime*

The Hydrocarbons Revenue Law that was adopted as part of the Secondary Legislation sets forth, among other things, the following duties applicable to us in connection with our assignments granted by the Mexican Government:

- *Derecho por la Utilidad Compartida* (Profit-sharing Duty): As of January 1, 2015, this duty is equivalent to 70% of the value of hydrocarbons produced in the relevant area, less certain permitted deductions. Pursuant to the Hydrocarbons Revenue Law, this duty is to decrease on an annual basis until January 1, 2019, at which point it will be set at 65%. During 2015, we paid Ps. 376,683 million in connection with this duty. On April 18, 2016, a decree was published in the Official Gazette of the Federation that increased the amount we can deduct for investments, costs, and expenses made pursuant to this duty. See “Item 5—Critical Accounting Policies—Exploration and Production Taxes and Duties” below.
- *Derecho de Extracción de Hidrocarburos* (Hydrocarbons Extraction Duty): This duty is to be determined based on a rate linked to the type of hydrocarbons (e.g., crude oil, associated natural gas, non-associated natural gas or condensates), the volume of production and the relevant market price. During 2015, we paid Ps. 48,858 million under this duty.
- *Derecho de Exploración de Hidrocarburos* (Exploration Hydrocarbons Duty): The Mexican Government is entitled to collect a monthly payment of Ps. 1,150 per square kilometer of non-producing areas. After 60 months, this duty increases to Ps. 2,750 per square kilometer for each additional month that the area is not producing. These amounts will be updated on an annual basis in accordance with the national consumer price index (NCPI). During 2015, we paid Ps. 989 million under this duty.
- In 2015, Mexican companies paid a corporate income tax at a rate of 30% applied to revenues, less certain deductions. Beginning in 2015, Petróleos Mexicanos and the subsidiary entities became subject to the *Ley del Impuesto sobre la Renta*, or Mexican Income Tax Law. During 2015, we paid Ps. 7,426 million under this tax.

Under this fiscal regime, we also remain subject to the following taxes:

- *IEPS sobre la venta de los combustibles automotrices* (IEPS Tax on the Sale of Automotive Fuels): This tax is a fee on domestic sales of automotive fuels, gasoline and diesel, that Pemex Industrial Transformation collects on behalf of the Mexican Government. The applicable fees for this tax are Ps. 4.16 per liter of Magna gasoline; Ps. 3.52 per liter of Premium gasoline and Ps. 4.58 per liter of diesel. The amount of the fee will depend on the class of fuel, and is fixed monthly by the Ministry of Finance and Public Credit.
- *IEPS a beneficio de entidades federativas, municipios y demarcaciones territoriales* (IEPS Tax in Favor of States, Municipalities and Territories): This tax is a fee on domestic sales of automotive fuels, gasoline and diesel, that Pemex Industrial Transformation collects on behalf of the Mexican Government. The applicable fees for this tax are 36.68 cents per liter of Magna gasoline, 44.75 cents per liter of Premium gasoline and 30.44 cents per liter of diesel. This fee changes yearly in accordance with inflation. Funds gathered by this fee are allocated to Mexican states and municipalities as provided for in the *Ley de Coordinación Fiscal* (Tax Coordination Law).
- *IEPS Tax on Fossil Fuels*: This tax is a fee on domestic sales of fossil fuels that Pemex Industrial Transformation collects on behalf of the Mexican Government. The applicable fees for this tax are 6.29 cents per liter for propane, 8.15 cents per liter for butane, 11.05 cents per liter for gasoline and aviation gasoline, 13.20 cents per liter for jet fuel and other kerosene, 13.40 cents per liter for diesel, 14.31 cents per liter for fuel oil and Ps. 16.60 per ton for petroleum coke. This fee changes yearly in accordance with inflation.

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The Hydrocarbons Revenue Law also establishes the fiscal terms to be applied to the contracts for exploration and production granted by the Mexican Government to us or to other companies in connection with future competitive bidding rounds. Specifically, these fiscal terms contemplate the following taxes, duties, royalties and other payments to the Mexican Government (in addition to any taxes owed pursuant to the *Ley de Ingresos de la Federación* (Federal Revenue Law) for the applicable year and other applicable tax laws):

- *Cuota Contractual para la Fase Exploratoria* (Exploration Phase Contractual Fee): During the exploration phase of a project governed by a license, production-sharing contract or profit-sharing contract, the Mexican Government is entitled to collect a monthly payment of Ps. 1,150 per square kilometer of non-producing areas. After 60 months, this fee increases to Ps. 2,750 per square kilometer for each additional month that the area is not producing. The fee amount will be updated on an annual basis in accordance with the NCPI.
- *Regalías* (Royalties): Royalty payments to the Mexican Government are determined based on the “contractual value” of the relevant hydrocarbons, which is based on a variety of factors, including the type of underlying hydrocarbons (*e.g.*, crude oil, associated natural gas, non-associated natural gas or condensates), the volume of production and the market price. Royalties are payable in connection with licenses, production-sharing contracts and profit-sharing contracts.
- *Pago del Valor Contractual* (Contractual Value Payment): Licenses require a payment calculated as a percentage of the “contractual value” of the hydrocarbons produced, as determined by the Ministry of Finance and Public Credit on a contract-by-contract basis.
- *Porcentaje a la Utilidad Operativa* (Operating Profit Payment): Production-sharing contracts and profit-sharing contracts require a payment equivalent to a specified percentage of operating profits. In the case of production-sharing contracts, this payment is to be made in-kind through delivery of the hydrocarbons produced. In the case of profit-sharing contracts, this payment is to be made in cash.
- *Bono a la Firma* (Signing Bonus): Upon execution of a license or migration of an assignment, a signing bonus is to be paid to the Mexican Government in an amount specified by the Ministry of Finance and Public Credit.
- *Impuesto por la actividad de Exploración y Extracción de Hidrocarburos* (Hydrocarbons Exploration and Extraction Activities Tax): Contracts for exploration and extraction and assignments granted by the Mexican Government will include a specified tax on the exploration and extraction activities carried out in the relevant area. A monthly tax of Ps. 1,500 per square kilometer is payable during the exploration phase until the extraction phase begins. During the extraction phase of a project, a monthly tax of Ps. 6,000 per square kilometer is payable until the relevant contract for exploration and extraction or assignment is terminated.

Under the Hydrocarbons Revenue Law, exploration and production activities associated with contracts for exploration and production are not subject to a value added tax.

Fluctuating crude oil price levels directly affect the level of certain taxes and duties that we pay. See “Item 3—Key Information—Risk Factors—Risk Factors Related to our Relationship with the Mexican Government—We pay significant special taxes and duties to the Mexican Government, which may limit our capacity to expand our investment program or negatively impact our financial condition generally.”

### *Other Payments to the Mexican Government*

Pursuant to the *Petróleos Mexicanos* Law, as of January 1, 2016, *Petróleos Mexicanos* and the subsidiary entities are required to pay a state dividend to the Mexican Government on an annual basis. In July of each year, *Petróleos Mexicanos* and the new subsidiary entities are required to provide the Ministry of Finance and Public Credit a report disclosing their financial results for the previous fiscal year and their investment and financing plans for the following five years, together with an analysis of the profitability of these investments and the relevant projections of their financial positions.

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The Ministry of Finance and Public Credit will rely on this report and a favorable opinion issued by a technical committee of the Mexican Petroleum Fund for Stabilization and Development to determine the amount of the state dividend to be paid by Petróleos Mexicanos and each of the subsidiary entities. The Petróleos Mexicanos Law provides that the aggregate amount of the state dividend to be paid in 2016 is to be equal to, at minimum, 30% of the total revenues of Petróleos Mexicanos and the subsidiary entities, after taxes, from the previous fiscal year. It further provides that that percentage will decrease in subsequent years, until reaching 15% in 2021 and 0% in 2026. The Mexican Government has announced that Petróleos Mexicanos will not be required to pay a state dividend in 2016.

### Other Taxes

Since 1994, our interest payments on our external debt have been subject to Mexican Government withholding taxes. Nevertheless, withholding taxes do not represent a substantial portion of our total tax liability.

We are subject to municipal and state taxes, such as real property and payroll taxes. However, because most of our facilities are located on federal property, which is not subject to municipal taxation, real property taxes are not a significant part of our overall taxes. Similarly, payroll taxes do not represent a substantial portion of our total tax liability.

In addition, we have a number of non-Mexican subsidiary companies that may be subject to taxation in the jurisdiction of their incorporation or operations. The aggregate taxes paid by the subsidiary companies were Ps. 2,660.4 million in 2013, Ps. 4,058.5 million in 2014 and Ps. 6,833.4 million in 2015.

No assurance can be given that our tax regime will not change in the future. See “Item 3—Key Information—Risk Factors—Risk Factors Related to our Relationship with the Mexican Government—We pay significant special taxes and duties to the Mexican Government, which may limit our capacity to expand our investment program or negatively impact our financial condition generally.”

## UNITED MEXICAN STATES

*The information in this section with regard to Mexico has been included due to Petróleos Mexicanos and the subsidiary entities' relationship with the Mexican Government and has been reviewed by the Ministry of Finance and Public Credit.*

### Form of Government

The President is the chief of the executive branch of the Mexican Government. The President is elected by the popular vote of Mexican citizens who are 18 years of age or older. The Mexican Constitution limits the President to one six-year term; the President is not allowed to run for reelection. In accordance with Mexico's electoral law, on August 31, 2012, the *Tribunal Electoral del Poder Judicial de la Federación* (Federal Electoral Court) officially validated the results of the presidential election held in Mexico on July 1, 2012, and declared Mr. Enrique Peña Nieto, a member of the *Partido Revolucionario Institucional* (Institutional Revolutionary Party, or PRI), President-elect. Mr. Enrique Peña Nieto took office on December 1, 2012 and his term will expire on November 30, 2018.

From 1929 to 1994, the PRI won all presidential elections, and, from 1929 until July 1997, the PRI held a majority of the seats in both chambers of the Mexican Congress. Until 1989, the PRI also won all of the state gubernatorial elections. In July 2000, the candidate from the *Alianza por el Cambio* (Alliance for Change), a coalition of the *Partido Acción Nacional* (National Action Party, or PAN), the oldest opposition party in the country, and the *Partido Verde Ecologista de México* (Ecological Green Party), won the presidential election. In addition, in 2006, Mr. Felipe de Jesús Calderón Hinojosa, a member of the PAN, was elected President. However, in 2012, the PRI candidate was once again elected President. Each of Mexico's 31 states is headed by a state governor. Mexico's Federal District, Mexico City, is headed by an elected mayor. State elections were most recently held on June 7, 2015. These elections were for the Baja California Sur, Campeche, Colima, Guerrero, Michoacán, Nuevo León, Querétaro, San Luis Potosí and Sonora governorships. As a result of these elections, Mexico's state governorships are currently composed as follows:

- the Democratic Revolutionary Party holds four state governorships and the mayoralty of Mexico's Federal District, Mexico City;



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- the PAN holds six state governorships;
- the *Movimiento Ciudadano* (Citizen Movement Party) holds one state governorship;
- the Ecological Green Party of México holds one state governorship;
- an unaffiliated candidate holds one state governorship; and
- the PRI holds the remaining 18 of the 31 state governorships.

Legislative authority is vested in the Mexican Congress, which is composed of the Senate and the Chamber of Deputies. Members of the Mexican Congress are elected either directly or through a system of proportional representation by the popular vote of Mexican citizens who are 18 years of age or older. Senators serve a six-year term, deputies serve a three-year term and neither may serve consecutive terms in the same chamber. The Senate is composed of 128 members, 96 of whom are elected directly, while the other 32 are elected through a system of proportional representation. The Chamber of Deputies is composed of 500 members, 300 of whom are elected directly by national electoral districts, while the other 200 are elected through a system of proportional representation.

Under this proportional representation system, seats are allocated to political party representatives based on the proportion of the votes cast for those parties that receive at least 3.0% of the national vote, among other requirements.

The Mexican Constitution provides that the President may veto bills and that the Mexican Congress may override such vetoes with a two-thirds majority vote of each chamber.

Congressional elections for all 500 seats in the Chamber of Deputies were last held on June 7, 2015. The following table provides the current distribution of congressional seats, reflecting certain post-election changes in the party affiliations of certain senators and deputies.

#### **Party Representation in the Mexican Congress**

	<b>Senate</b>		<b>Chamber of Deputies</b>	
	<b>Seats</b>	<b>% of Total</b>	<b>Seats</b>	<b>% of Total</b>
Institutional Revolutionary Party	54	42.2%	203	40.8%
National Action Party	38	29.7	108	21.7
Democratic Revolution Party	21	16.4	60	12.0
Ecological Green Party of Mexico	7	5.5	46	9.2
Social Encounter Party	0	0	8	1.6
Labor Party	6	4.7	0	0
Citizen Movement Party	0	0.0	25	5.0
New Alliance Party	0	0.0	11	2.2
Unaffiliated	2	1.6	2	0.4
National Regeneration Movement (New)	0	0	35	7.0
Total	<u>128</u>	<u>100.0%</u>	<u>498</u>	<u>99.6%</u>

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[Table of Contents](#)**The Economy***National Development Plan*

The *Plan Nacional de Desarrollo 2013-2018* (National Development Plan), published in the Official Gazette of the Federation on May 20, 2013, establishes the basic goals and objectives of President Enrique Peña Nieto during his six-year term. These objectives are to:

- achieve peace in Mexico, thereby promoting a firm base for democracy, governance and security;
- make Mexico more inclusive for its citizens and better protect their social rights;
- improve the quality of, and increase access to, Mexico's education system;
- promote prosperity by stimulating sustainable economic growth, with a particular emphasis on improving equality of opportunities; and
- emphasize Mexico's role as a responsible global actor, by: (i) focusing on its external policy goals; (ii) promoting free international trade; and (iii) being a positive and proactive force in the international community.

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In addition, the National Development Plan proposes the following three general strategies that will be incorporated in all government policies:

<b>Strategy</b>	<b>Rationale</b>
Democratization of productivity	This strategy: (1) facilitates the growth and competitiveness of the Mexican economy; (2) carries out public policies that eliminate obstacles limiting the productivity of Mexican citizens and corporations; and (3) encourages participants in the Mexican economy to efficiently use resources.
Create an effective and modern government	This strategy: (1) guarantees access to information and the protection of personal data; (2) expands the use and development of information and communication technologies in order to improve the effectiveness of governmental actions; and (3) consolidates a government that is productive and effective at attaining its objectives through the appropriate allocation of resources, promotion based on individual merit, promulgation of best practices and implementation of automated administrative systems.
Promote gender equality	This strategy incorporates the principle of gender equality in all government policies and actions.

[Table of Contents](#)*Gross Domestic Product*

The following table sets forth the percentage change in Mexico's real gross domestic product (GDP) by economic sector in constant 2008 pesos for the periods indicated.

**Real GDP Growth by Sector**  
(% change against prior years)<sup>(1)</sup>

	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014<sup>(2)</sup></b>	<b>Third quarter 2015<sup>(2)(3)</sup> (annualized)</b>
GDP (constant 2008 prices)	5.1%	4.0%	4.0%	1.3%	2.3%	2.6%
Primary activities:						
Agriculture, forestry, fishing, hunting and livestock <sup>(4)</sup>	0.8	(2.3)	7.4	0.9	4.3	4.1
Secondary activities:						
Mining	0.9	(0.4)	0.9	(0.1)	(1.5)	(5.6)
Utilities	4.5	6.9	2.1	0.5	8.2	3.8
Construction	0.8	4.1	2.5	(4.8)	2.0	3.5
Manufacturing	8.5	4.6	4.1	1.1	3.9	2.8
Tertiary activities:						
Wholesale and retail trade	11.9	9.7	4.8	2.2	3.1	4.8
Transportation and warehousing	7.7	4.0	4.1	2.4	3.4	4.0
Mass media information	1.0	4.4	16.3	5.0	0.2	9.3
Finance and insurance	21.0	7.1	7.7	10.4	(0.9)	1.7
Real estate, rental and leasing	2.8	2.9	2.5	1.0	2.0	2.2
Professional, scientific and technical services	(0.1)	5.1	1.1	1.2	1.7	3.4
Management of companies and enterprises	5.3	3.5	8.6	(1.8)	7.2	0.1
Administrative support, waste management and remediation services	0.7	6.0	4.4	4.3	(0.2)	0.4
Education services	0.2	1.6	2.2	0.8	0.1	0.5
Health care and social assistance	(0.1)	2.1	2.1	0.6	(0.6)	0.9
Arts, entertainment and recreation	4.1	(0.7)	2.9	3.4	(1.5)	5.3
Accommodation and food services	1.9	1.5	5.4	1.8	2.9	7.1
Other services (except public administration)	1.0	1.9	3.3	2.1	1.6	1.4
Public administration	2.4	(1.4)	3.7	(0.5)	2.9	0.7

Note: Numbers may not total due to rounding.

(1) Based on GDP calculated in constant 2008 pesos.

(2) Preliminary figures. Further, nominal GDP figures for 2014 reflect the latest INEGI release of such figures on November 20, 2015.

(3) Annualized. Actual third quarter nominal GDP data has been annualized by multiplying it by four. The annualized data is included for comparison purposes only, and is not necessarily indicative of, and may vary materially from, performance for the full fiscal year.

(4) GDP figures relating to agricultural production set forth in this table and elsewhere herein are based on figures for "agricultural years," with the definition of the relevant "agricultural year" varying from crop to crop based on the season during which it is grown. Calendar year figures are used for the other components of GDP.

Source: INEGI.

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According to preliminary figures, Mexico's GDP increased by 2.6% in real terms during the third quarter of 2015, as compared to the same period of 2014. This increase was due to growth in real terms in all sectors, except the mining sector which decreased by 5.6% in real terms. As with all quarterly GDP figures released by the *Instituto Nacional de Estadística y Geografía* (National Institute of Statistics and Geography, or INEGI), this GDP figure has been annualized by multiplying GDP for the third quarter by four. Quarterly real GDP data for the period presented is not necessarily indicative of performance for the full fiscal year.

### *Prices and Wages*

Consumer inflation (as measured by the change in the national consumer price index) for the nine months ended September 30, 2015 was 2.5% in annualized terms, 1.7 percentage points lower than during the same period of 2014. This was due mainly to an annualized decrease in the prices of professional services and air transportation.

On January 7, 2016, INEGI published its inflation report for December 2015 indicating an annual consumer inflation rate of 2.1% for 2015, almost 2 percentage points lower than the annual consumer inflation rate for 2014. Despite a depreciation of the peso/U.S. dollar exchange rate, decreases in the prices of energy, commodities and telecommunications services contributed to the favorable change in the rate of inflation.

### *Employment and Labor*

According to preliminary figures, Mexico's unemployment rate was 4.6% as of September 30, 2015, a 0.6 percentage point decrease from the rate during the same period of 2014.

As of September 30, 2015, the economically active population in Mexico older than fifteen years of age consisted of 53.2 million individuals, while the unemployed population in Mexico older than fifteen years of age consisted of 2.4 million individuals. The table below sets forth the total, as well as the percentage, of unemployed individuals in Mexico based on age and gender as of September 30, 2015:

**Unemployed Population by Age and Gender**

	<u>Total</u>	<u>%</u>	<u>Men</u>	<u>%</u>	<u>Women</u>	<u>%</u>
Total	2,445,263	100%	1,468,202	60.0%	977,061	40.0%
15-24 years	880,451	36.0%	492,500	33.5%	387,951	39.7%
25-44 years	1,130,412	46.2%	659,345	44.9%	471,067	48.2%
45-64 years	400,772	16.4%	287,126	19.6%	113,646	11.6%
65+ years	33,266	1.4%	28,996	2.0%	4,270	0.4%
Unspecified	362	0.0%	235	0.0%	127	0.0%

Source: INEGI

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As in the past, unemployment continues to be particularly widespread in rural areas, where, according to INEGI's 2010 housing and population census, approximately 22.2% of the population resides. The following table sets forth preliminary figures for the unemployment rate and the total population in Mexico by state as of September 30, 2015:

	<u>Unemployment Rate %</u>	<u>Population</u>
Aguascalientes	4.2	1,287,660
Baja California	3.6	3,484,150
Baja California Sur	4.2	763,929
Campeche	3.0	907,878
Coahuila	4.3	2,960,681
Colima	4.2	723,455
Chiapas	3.2	5,252,808
Chihuahua	3.3	3,710,129
Distrito Federal	5.2	8,854,600
Durango	3.9	1,764,726
Guanajuato	4.3	5,817,614
Guerrero	2.1	3,568,139
Hidalgo	3.1	2,878,369
Jalisco	4.3	7,931,267
México	5.7	16,870,388
Michoacán	3.1	4,596,499
Morelos	3.2	1,920,350
Nayarit	4.6	1,223,797
Nuevo León	3.8	5,085,848
Oaxaca	2.7	4,012,295
Puebla	3.0	6,193,836
Querétaro	4.6	2,004,472
Quintana Roo	3.7	1,574,824
San Luis Potosí	2.6	2,753,478
Sinaloa	4.3	2,984,571
Sonora	4.7	2,932,821
Tabasco	7.6	2,383,900
Tamaulipas	4.1	3,543,366
Tlaxcala	4.9	1,278,308
Veracruz	4.1	8,046,828
Yucatán	2.6	2,118,762
Zacatecas	3.6	1,576,068

Source: INEGI and Consejo Nacional de Poblacion (National Population Council)

The services sector employs the largest percentage of Mexico's economically active population. The following table sets forth preliminary figures for the percentage of Mexico's economically active population by sector of the Mexican economy as of December 31, 2015:

	<u>Percentage</u>
Services	42.1
Commerce	20.0
Manufacturing	15.7
Agriculture	13.5
Construction	7.5
Other	0.8
Unspecified	0.5

Source: INEGI and National Population Council

### *Interest Rates*

During 2015, interest rates on 28-day *Cetes* (Mexico's Federal Treasury Certificates) averaged 3.0%, as compared to 3.0% during 2014. Interest rates on 91-day *Cetes* averaged 3.1%, as compared to 3.1% during 2014.

On February 11, 2016, the 28-day *Cetes* rate was 3.2% and the 91-day *Cetes* rate was 3.4%.

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**Principal Sectors of the Economy**
*Manufacturing*

The following table sets forth the change in industrial manufacturing output by sector for the periods indicated.

**Industrial Manufacturing Output Differential by Sector**  
(% change against prior years)<sup>(1)</sup>

	<u>2010</u>	<u>2011<sup>(2)</sup></u>	<u>2012<sup>(2)</sup></u>	<u>2013<sup>(2)</sup></u>	<u>2014<sup>(2)</sup></u>	<u>First nine months of 2014<sup>(2)</sup></u>	<u>First nine months of 2015<sup>(2)(3)</sup></u>
Food	1.7%	2.2%	2.6%	1.0%	0.5%	0.7%	1.7%
Beverage and tobacco products	0.6	4.6	2.6	(0.5)	4.7	4.6	4.8
Textile mills	10.9	(4.4)	3.1	(2.7)	(3.1)	(3.6)	2.0
Textile product mills	2.5	(2.9)	(0.1)	3.5	6.3	3.0	11.6
Apparel	4.6	0.2	(0.5)	3.3	(3.0)	(1.3)	5.7
Leather and allied products	7.7	(0.7)	3.5	(0.6)	(1.7)	(2.1)	2.0
Wood products	5.5	5.1	13.0	(2.2)	1.1	(0.2)	4.3
Paper	3.7	(0.8)	4.8	2.1	3.1	2.5	3.8
Printing and related support activities	10.0	4.2	(4.1)	(6.9)	(2.2)	(4.5)	0.6
Petroleum and coal products	(7.2)	(3.6)	1.1	3.3	(4.4)	(3.0)	(9.5)
Chemicals	(0.4)	(0.1)	(0.3)	0.8	(0.8)	(1.3)	(1.1)
Plastics and rubber products	13.5	6.7	9.0	(1.9)	5.3	4.9	4.6
Nonmetallic mineral products	4.7	3.7	2.3	(3.1)	2.0	0.8	5.4
Primary metals	12.4	4.3	3.8	0.4	8.8	9.6	(2.5)
Fabricated metal products	8.8	7.0	3.9	(3.3)	6.0	4.6	6.2
Machinery	47.2	13.3	5.5	1.0	(0.6)	0.2	(0.6)
Computers and electronic products	3.7	6.7	0.5	3.8	10.6	9.0	7.7
Electrical equipment, appliances and components	10.1	(1.1)	1.7	(2.0)	8.5	6.7	6.9
Transportation equipment	42.2	16.6	13.9	5.6	12.1	11.6	7.7
Furniture and related products	7.1	1.2	2.8	(6.0)	(1.8)	(5.0)	13.0
Miscellaneous	1.9	5.1	0.4	0.0	6.4	6.7	4.6
Total expansion/contraction	8.5	4.6	4.1	1.1	3.9	3.7	3.1

(1) Percent change reflects differential in constant 2008 pesos.

(2) Preliminary figures.

(3) First nine months of 2015 results as compared to the corresponding period of 2014.

Source: INEGI.

According to preliminary figures, the manufacturing sector expanded by 0.6% in real terms during the first nine months of 2015 as compared to 2014. This expansion was primarily due to a 10.5% increase in real terms in the furniture and related products sectors, as well as a 9.1% increase in real terms in the textile product sectors. However, some other manufacturing sectors contracted in real terms, such as the petroleum and coal products sector and the primary metals sector (which decreased 12.0% and 5.0% respectively, in real terms). In total, eight manufacturing sectors contracted during the first nine months of 2015, while thirteen sectors grew in the first nine months of 2015, as compared to the same period in 2014.

*Tourism*

Tourism increased during the first seven months of 2015. As compared to the first seven months of 2014, the tourism sector experienced both increases and decreases in the following areas:

- revenues from international travelers (including both tourists and visitors who enter and leave the country on the same day) totaled U.S. \$10.7 billion, a 8.5% increase from the same period in 2014;
- revenues from tourists to the interior of Mexico (as opposed to border cities) totaled U.S. \$9.1 billion, a 9.2% increase from the same period in 2014;
- the number of tourists to the interior of Mexico totaled 10.7 million, a 11.1% increase from the same period in 2014;

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- the average expenditure per tourist to the interior of Mexico totaled U.S. \$848.4, a 1.7% decrease from the same period in 2014;
- expenditures by Mexican tourists abroad totaled U.S. \$3.5 billion, a 7.7% increase from the same period in 2014; and
- expenditures by Mexicans traveling abroad (which include both tourists and one-day visitors) totaled U.S. \$5.7 billion, an 8.5% increase from the same period in 2014.

**Financial System**
*2015 Monetary Program*

Consistent with Mexico's monetary program for 2014, the principal objective of Mexico's 2015 monetary program is to achieve an inflation rate at or below the permanent target of 3.0% (+/-1.0%), which is intended to stabilize the purchasing power of the Mexican peso.

Mexico's monetary program for 2015 is comprised of the following features:

- an explicit, multi-year plan to control inflation;
- an analysis of the economy and inflationary pressures;
- a description of the tools used by *Banco de México* to achieve its objectives;
- a communication policy that promotes transparency, credibility and effective monetary policy; and
- a provision that encourages/promotes the expedient adoption of monetary policy measures, which are intended to reduce inflation and prevent its effects on the formation of prices.

*Money Supply and Financial Savings*

At December 31, 2015, the monetary base totaled Ps. 1,241.7 billion, a 16.8% nominal increase from the level of Ps. 1,062.9 billion at December 31, 2014, due to a 17.2% nominal increase in the amount of bills and coins held by the public and a 9.8% nominal increase in checking account deposits. This increase was caused, in part, by fiscal reforms and the temporary effects of local campaigns and elections.

The M1 money supply of Mexico is the sum of bills and coins held by the public, plus checking accounts denominated in local currency and foreign currency, plus interest-bearing deposits denominated in pesos and operated by debit cards, plus savings and loan deposits. At December 31, 2015, Mexico's M1 money supply was 18.6% greater in real terms than the level at December 31, 2014. The amount of bills and coins held by the public was 19.4% greater in real terms than at December 31, 2014. In addition, the aggregate amount of checking account deposits denominated in pesos was 11.9% greater in real terms than at the same date in 2014.

At December 31, 2015, financial savings—defined as the difference between the monetary aggregate M4 and bills and coins held by the public—were 7.0% greater in real terms than financial savings at December 31, 2014. Savings generated by Mexican residents increased by 10.0% and savings generated by non-residents increased by 1.3%, both in real terms, as compared to the same period of 2014.

*The Securities Markets*

The BMV is the only authorized stock exchange involved in the listing and trading of equity and debt securities in Mexico. Upon the consummation of the initial public offering of its shares on June 18, 2008, the BMV was transformed from a *sociedad anónima de capital variable* (private company) to a *sociedad anónima bursátil de capital variable* (public company). In connection with the initial public offering of shares, certain of the former stockholders of the BMV (banks and brokerage houses) created a control trust into which they deposited more than 50% of the issued and outstanding shares of the BMV, for purposes of voting such shares in the future as a single block.



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Both debt and equity securities are listed and traded on the BMV, including stocks and bonds of private sector corporations, equity certificates or shares issued by banks, commercial paper, bankers' acceptances, certificates of deposit, Mexican Government debt and special hedging instruments linked to the dollar. Currently, institutional investors are the most active participants in the BMV, although retail investors also play a role in the market. The Mexican equity market is one of Latin America's largest in terms of market capitalization, but it remains relatively small and illiquid compared to major world markets.

The BMV publishes the *Índice de Precios y Cotizaciones* (Stock Market Index, or IPC) based on a group of the 35 most actively traded shares.

At February 11, 2016, the IPC stood at 42,359.3 points, representing a 1.44% decrease from the level at December 31, 2015.

***Banking Supervision and Support***

At December 31, 2015, the total loan portfolio of the banking system was 15.9% greater in real terms than the total loan portfolio at December 31, 2014.

According to preliminary figures, at December 31, 2015, the total amount of past-due commercial bank loans (excluding those banks undergoing government intervention and those in special situations) was Ps. 85.4 billion, as compared to Ps. 91.3 billion at December 31, 2014. Moreover, the past-due loan ratio of commercial banks was 2.3%, as compared to a ratio of 2.8% at December 31, 2014. The amount of loan loss reserves held by commercial banks at December 31, 2015 totaled Ps. 114.4 billion, as compared to Ps. 115.6 billion at December 31, 2014. As a result, commercial banks had reserves covering 134.0% of their past-due loans, well exceeding the minimum reserve level of 10.5%.

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**External Sector of the Economy***Foreign Trade*

According to preliminary figures, during 2015, Mexico registered a trade deficit of U.S. \$14.5 billion, as compared to a trade deficit of U.S. \$2.8 billion during 2014. This was caused mainly by a reduction in oil and oil products exports. In particular, exports increased or decreased as follows, each as compared to 2014:

- petroleum exports decreased by 45.0%;
- non-petroleum exports increased by 0.8%;
- merchandise exports decreased by 4.1%, to U.S. \$380.8 billion, as compared to U.S. \$397.1 billion during 2014; and
- exports of manufactured goods (which represented 89.3% of total merchandise exports) increased by 0.8%.

According to preliminary figures, during 2015, total imports decreased by 1.2%, to U.S. \$395.2 billion, as compared to U.S. \$400.0 billion during 2014. In particular, imports increased or decreased as follows, each as compared to 2014:

- imports of intermediate goods decreased by 1.6%;
- imports of capital goods increased by 5.2%; and
- imports of consumer goods decreased by 3.5%.

*Balance of International Payments*

According to preliminary figures, during the first nine months of 2015, Mexico's current account registered a deficit of 2.2% of GDP, or U.S. \$24.7 billion, as compared to a deficit of U.S. \$18.9 billion for the same period of 2014, which was mainly due to a reduction in merchandise exports. The capital account registered a surplus of U.S. \$32.5 billion during the first nine months of 2015, as compared to a surplus of U.S. \$38.3 billion during the same period of 2014. Foreign investment in Mexico totaled U.S. \$28.7 billion during the first nine months of 2015 and was composed of direct foreign investment inflows totaling U.S. \$21.6 billion and net foreign portfolio investment inflows (including securities placed abroad) totaling U.S. \$7.1 billion.

At March 20, 2015, *Banco de México*'s international assets totaled U.S. \$197.9 billion, an increase of U.S. \$2.6 billion as compared to international reserves at December 31, 2014. At March 20, 2015, *Banco de México*'s net international reserves totaled U.S. \$195.5 billion, an increase of U.S. \$2.9 billion from the amount at December 31, 2014.

On November 7, 2014, *Banco de México*'s Foreign Exchange Commission submitted a request to the International Monetary Fund (IMF) for an advanced renewal and amendment of Mexico's Flexible Credit Line (FCL) with the IMF. This request would extend the term of the credit line another two years. On November 26, 2014, the IMF granted this request. As of November 23, 2015, the amount available under Mexico's credit line with the IMF was approximately U.S. \$65.1 billion. As of the date of this report, no amounts have been disbursed under this credit line.

*Exchange Controls and Foreign Exchange Rates*

On February 11, 2016, the peso/U.S. dollar exchange rate closed at Ps. 18.7818 = U.S. \$1.00, a 9.2% depreciation in dollar terms as compared to the rate on December 31, 2015. The peso/U.S. dollar exchange rate announced by *Banco de México* on February 11, 2016 (which took effect on the second business day thereafter) was Ps. 19.1754 = U.S. \$1.00.

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**Public Finance***Fiscal Policy*

The *Programa Nacional de Financiamiento del Desarrollo* 2013-2018 (National Program to Finance Development 2013-2018, or PRONAFIDE), which was announced on December 16, 2013, establishes the Mexican Government's fiscal policy goals. These goals include securing sufficient fiscal resources to strengthen social infrastructure and productivity. To this end, PRONAFIDE has outlined the following specific objectives:

- promote economic development and macroeconomic stability;
- improve the financial system to generate additional resources and to transform it into a simpler and more progressive system;
- increase spending efficiency to promote growth, development and productivity, while still maintaining accountability;
- encourage the notion of "fiscal federalism," so that states and municipalities can also reach and maintain balanced public financing;
- foster inclusion, education, competition and transparency in the financial, insurance and pension systems, thereby increasing their access and coverage while retaining their effectiveness and reliability; and
- extend credit to development banks that facilitate access to financial services in strategic sectors of the economy and that place particular emphasis on the private sector.

*2015 UMS Budget and Fiscal Results*

On September 9, 2014, the President of Mexico submitted the proposed 2015 Revenue Law and the proposed 2015 Expenditure Budget to Congress for its approval. The 2015 Revenue Law and the 2015 Expenditure Budget were approved on October 30, 2014 and November 13, 2014, and were published in the Official Gazette of the Federation on November 13, 2014 and December 3, 2014, respectively. We refer to these two bills together as Mexico's 2015 budget (the 2015 UMS Budget).

In nominal pesos and according to preliminary figures, the public sector balance registered a deficit of Ps. 637.6 billion (including physical investment expenditures by PEMEX) during 2015. This deficit was Ps. 543.1 billion during 2014. The public sector balance registered a deficit of Ps. 490.8 billion (excluding physical investment expenditures by PEMEX), as compared to a Ps. 410.4 billion deficit registered for the same period of 2014.

In nominal pesos and according to preliminary figures, including physical investment expenditures by PEMEX, the total primary balance registered a deficit of Ps. 217.6 billion during 2015, 13.4% lower in nominal terms than during 2014.

According to preliminary figures, during 2015, public sector budgetary revenues amounted to Ps. 4,264.6 billion in nominal pesos, 4.8% greater in real terms as compared to 2014. During 2015, revenues have increased or decreased as follows, each in real terms and as compared to 2014:

- crude oil revenues decreased by 32.5%;

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- non-oil tax revenues increased by 28.2%; and
- non-tax PEMEX revenues (as a percentage of total public sector budgetary revenues) decreased by 1.1 percentage points, to 10.0%, as compared to approximately 11.1% in 2014.

According to preliminary figures, during 2015, net public sector budgetary expenditures increased by 5.8% in real terms as compared to 2014. Net public sector budgetary programmable expenditures (excluding physical investment by PEMEX) increased by 7.0% in real terms as compared to 2014. During 2015, the financial cost of public sector debt increased by 15.4% in real terms as compared to 2014.

The following indicates the remaining amounts in various stabilization funds as of December 31, 2015:

- the *Fondo de Estabilización de los Ingresos Presupuestarios* (Budgetary Income Stabilization Fund, formerly known as Oil Revenues Stabilization Fund) totaled Ps. 16.6 billion;
- the *Fondo de Estabilización de los Ingresos de las Entidades Federativas* (Federal Entities Revenue Stabilization Fund) totaled Ps. 4.8 billion; and
- the Fondo de Estabilización para la Inversión en Infraestructura de Petróleos Mexicanos (PEMEX Infrastructure Investment Stabilization Fund) and the Fondo de Apoyo para la Reestructura de Pensiones (Fund to Support Pension Restructuring) did not have any remaining funds.

### *2016 UMS Budget*

On September 8, 2015, the President of Mexico submitted the proposed *Ley de Ingresos de la Federación para el Ejercicio Fiscal de 2016* (Federal Revenue Law for 2016, or the 2016 Revenue Law) and the proposed *Presupuesto de Egresos de la Federación para el Ejercicio Fiscal de 2016* (Federal Expenditure Budget for 2016, or the 2016 Expenditure Budget) to the *Mexican Congress* for its approval. The 2016 Revenue Law was approved by the Senate on October 29, 2015, and the 2016 Expenditure Budget was approved by the Chamber of Deputies on November 13, 2015. They were published in the Official Gazette of the Federation on November 18, 2015, and November 27, 2015, respectively. We refer to these two bills together as Mexico's 2016 budget (the 2016 UMS Budget).

If certain conditions are met, the Federal Law for Budget and Fiscal Accountability authorizes the executive branch, acting through the Ministry of Finance and Public Credit, to approve additional expenditures above those adopted by the 2016 Expenditure Budget. Those expenditures could be approved if the budgetary balance is not negatively affected and if they would not increase a budgetary deficit.

A new provision of the Federal Law of Budget and Fiscal Accountability (article 19 Bis, which became effective on January 1, 2016), sets forth the obligation of the Mexican Government to use *Banco de México's* operational surplus as follows: i) not less than 70% to pre-pay previously assumed public debt or to reduce the current year's financing needs and ii) the remainder to strengthen the Budget Income Stabilization Fund, or to acquire assets to improve the Mexican Government's financial position.

The 2016 UMS Budget provides for a public sector budget deficit excluding physical investments by PEMEX of 0.5% of GDP. Including PEMEX's physical investment program, the 2016 UMS Budget provides for a public sector budget deficit of 3.0% of GDP. The 2016 UMS Budget contemplates public sector budgetary revenues totaling Ps. 4,763.9 billion, a 1.6% decrease in real terms as compared to public sector budgetary revenues estimated for Mexico's 2015 budget (the 2015 UMS Budget). The 2016 UMS Budget estimates are based on an assumed weighted average Mexican crude oil export price of U.S. \$50.00 per barrel and an estimated volume of oil exports of 1.1 million barrels per day. Oil revenues are estimated at Ps. 884.4 billion in nominal pesos, a 28.3% decrease in real terms as compared to the estimated amount for the 2015 UMS Budget. In addition, approved non-oil revenues are Ps. 3,270.2 billion, a 12.2% increase as compared to the estimated amount for the 2015 UMS Budget. Finally, projected non-oil tax revenues also increased by 18.7% in real terms as compared to the amount approved for the 2015 UMS Budget.

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The 2016 Expenditure Budget provides for a total of Ps. 4,285.6 billion in expenditures (excluding estimated physical investment expenditures by PEMEX totaling Ps. 478.2 billion), a 14.2% decrease in real terms as compared to the amount approved in the *Presupuesto de Egresos de la Federación para el Ejercicio Fiscal de 2015* (Federal Expenditure Budget for 2015, or the 2015 Expenditure Budget). Estimated budget expenditures include the following:

- Ps. 132.2 billion (2.8% of total budgetary programmable expenditures) on health and social security;
- Ps. 303.0 billion (6.4% of total budgetary programmable expenditures) on education;
- Ps. 20.6 billion (0.4% of total budgetary programmable expenditures) on housing and community development;
- Ps. 357.4 billion for servicing the debt of the Mexican Government, including servicing the debt of the *Instituto para la Protección al Ahorro Bancario* (Bank Savings Protection Institute, or IPAB); and
- Ps. 84.4 billion for servicing the debt of the CFE and PEMEX.

The 2016 UMS Budget authorizes the Mexican Government to incur net domestic debt in the amount of Ps. 535.0 billion in nominal pesos, or 2.8% of GDP. The 2016 UMS Budget also authorizes the Mexican Government to incur an additional U.S. \$6.0 billion in external indebtedness, which includes financing from international financial organizations.

The table below sets forth the budgetary results for 2014, as well as the first nine months of 2015. It also sets forth the assumptions and targets underlying Mexico's 2015 UMS Budget and 2016 UMS Budget.

### 2014 and First Nine Months of 2015 Results; 2015 UMS Budget and 2016 UMS Budget Assumptions and Targets

	2014 Results <sup>(1)</sup>	First nine months of 2014 Results <sup>(1)</sup>	2015 Budget <sup>(2)</sup>	First nine months of 2015 Results <sup>(1)</sup>	2016 Budget <sup>(5)</sup>
Real GDP growth (%)	2.3%	2.1%	3.7%	2.5%	3.1% <sup>(6)</sup>
Increase in the national consumer price index (%)	4.1%	2.2%	3.0%	0.6%	3.0%
Average export price of Mexican oil mix (U.S. \$/barrel)	\$ 86.00	\$ 93.21	\$ 82.00 <sup>(3)</sup>	\$ 46.37	\$ 50.00
Average exchange rate (Ps./\$1.00)	13.3	13.1	13.0	15.6	16.4
Average rate on 28-day <i>Cetes</i> (%)	3.0%	3.0%	3.5%	3.0%	4.5%
Public sector balance as % of GDP <sup>(4)</sup>	(3.8)%	(3.0)%	(3.5)%	(3.1)%	n.a.
Primary balance as % of GDP <sup>(4)</sup>	(1.3)%	(1.4)%	(1.3)%	(1.3)%	(0.6)%
Current account deficit as % of GDP	(2.4)%	(1.8)%	(2.0)%	(2.8)%	(2.6)%

n.a. = Not available.

(1) Preliminary figures.

(2) 2015 UMS Budget figures represent budgetary estimates, based on the economic assumptions contained in the *Criterios Generales de Política Económica 2015* (General Economic Policy Guidelines for 2015) and in the *Programa Económico 2015* (Economic Program for 2015). These figures do not reflect actual results for the year or updated estimates of Mexico's 2015 economic results.

(3) The Mexican Government entered into hedging agreements to protect against the effects of a potential decline in oil prices with respect to the level that was assumed in the 2015 Revenue Law. Therefore, the approved expenditures level should not be affected if the weighted average price of crude oil exported by PEMEX for the year falls below the price assumed in the 2015 UMS Budget.

(4) Includes the effect of expenditures related to the issuance of bonds pursuant to reforms to the *Ley del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado* (Law of the Institute for Social Security and Social Services of Government Workers, or ISSSTE Law) and recognition as public sector debt of certain PIDIREGAS obligations, as discussed under "Public Finance—Revenues and Expenditures—General" in Mexico's 2014 Form 18-K.

(5) 2016 UMS Budget figures represent budgetary estimates, based on the economic assumptions contained in the *Criterios Generales de Política Económica 2016* (General Economic Policy Guidelines for 2016) and in the *Programa Económico 2016* (Economic Program for 2016), as modified by the 2016 UMS Budget adopted by the Mexican Congress.

(6) Represents the median of the estimated range of real GDP growth (2.6% to 3.6%).

Source: Ministry of Finance and Public Credit.

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**Public Debt**

Mexico's external public debt goals for 2015 was intended to provide the Mexican Government with flexibility to finance its stated needs, while also accounting for market volatility and unforeseen developments. The policy also sought to maintain costs and risks at stable levels. Going forward, Mexico's public debt policy will continue the practice of relying on local markets as the main source of funding for the Mexican Government, which will be supplemented by external financing from the U.S., Europe and Japan. Mexico's principal objectives in connection with its external financing include:

- improving the terms and conditions of Mexico's external liabilities;
- strengthening and diversifying Mexico's investor base, with specific consideration to Mexico's continued presence in the most influential international markets;
- strengthening Mexico's benchmark bonds; and
- maintaining a constant relationship with international investors in order to ensure transparency and to promote investment in Mexico.

*Internal Public Debt*

The Mexican Government's "net internal debt" includes only the internal portion of indebtedness incurred directly by the Mexican Government, *Banco de México*'s general account balance and the assets of the *Fondo del Sistema de Ahorro Para el Retiro* (Retirement Savings System Fund). In addition, "net internal debt" is comprised of *Cetes* and other securities sold to the public in auctions for new issuances (primary auctions), but does not include any debt allocated to *Banco de México* for its use in *Regulación Monetaria* (regulating the money supply). It also does not include debt by the *Instituto para la Protección al Ahorro Bancario* (Bank Savings Protection Institute, or IPAB) or the debt of budget-controlled or administratively-controlled agencies.

Over the last two decades, the Mexican Government has actively sought to increase its average debt maturity date. Accordingly, the Mexican Government has issued new debt instruments bearing longer maturities than those previously issued. In doing so, the Mexican Government hopes to mitigate any risk associated with the refinancing of its internal public debt. This has had the effect of establishing a long-dated benchmark yield curve (the line that plots interest rates across different contract lengths for bonds having equal credit quality). These issuances have also encouraged long-term investments in the following areas: (1) fixed-rate contracts; (2) peso-denominated securities by Mexican companies; (3) Mexican financial hedging products; and (4) the use of long-term savings in financing long-term investment projects.

According to preliminary figures, at December 31, 2015, the Mexican Government's net internal debt totaled Ps. 4,814.1 billion, an 11.3% increase in nominal terms as compared to Ps. 4,324.1 billion outstanding at December 31, 2014. This debt figure includes the Ps. 153.8 billion liability associated with social security under the ISSSTE Law, as described under "The Economy—Employment and Labor" in Mexico's 2014 Form 18-K. The net internal debt of the public sector, on the other hand, totaled Ps. 5,379.9 billion according to preliminary figures, a 12.0% increase in nominal terms as compared to the Ps. 4,804.3 billion outstanding at December 31, 2014.

According to preliminary figures, at December 31, 2015, the Mexican Government's gross internal debt totaled Ps. 5,074.0 billion, an 11.6 % increase in nominal terms as compared to Ps. 4,546.6 billion outstanding at December 31, 2014. Of the total gross internal debt of the Mexican Government at December 31, 2015, Ps. 490.6 billion represented short-term debt, as compared to Ps. 520.8 billion at the end of 2014, and Ps. 4,583.4 billion represented long-term debt, as compared to Ps. 4,025.8 billion at the end of 2014. The gross internal debt of the public sector, on the other hand, totaled Ps. 5,639.5 billion at December 31, 2015 according to preliminary figures, an 11.7% increase in nominal terms as compared to Ps. 5,049.5 billion outstanding at December 31, 2014. For purposes of this "Public Debt" section, public sector debt consists of the long-term indebtedness incurred directly by the Mexican Government, the long-term indebtedness incurred by budget-controlled agencies, the long-term indebtedness incurred directly or guaranteed by administratively controlled agencies (including, but not limited to, national development banks) and the short-term debt of the public sector. It does not include private sector debt guaranteed by the Mexican Government, unless and until the Mexican Government is called upon to make payment

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under its guaranty. Also for purposes of this “Public Debt” section, long-term debt is defined as all debt with maturities of one year or more from the date of issue, while short-term debt is defined as all debt with maturities of less than one year from the date of issue.

According to preliminary figures, at December 31, 2015, the Mexican Government’s financing costs on its internal debt totaled Ps. 262.4 billion, representing an 6.9% nominal increase as compared to its financing costs of Ps. 245.4 billion, during the same period of 2014.

As of December 31, 2015, the average maturity of the Mexican Government’s internal debt remained at 8 years.

The following table summarizes the net internal debt of the Mexican Government at each of the dates indicated.

### Net Internal Debt of the Mexican Government<sup>(1)</sup>

	At December 31,											
	2010		2011		2012		2013		2014		2015 <sup>(2)</sup>	
	(in billions of pesos, except percentages)											
<b>Gross Debt</b>												
Government Securities	Ps.2,553.9	88.4%	Ps.2,882.8	90.2%	Ps.3,257.8	91.1%	Ps.3,734.1	91.9%	Ps.4,223.3	92.9%	Ps.4,701.2	92.7%
<i>Cetes</i>	394.0	13.6	456.6	14.3	531.3	14.9	635.6	15.6	678.7	14.9	655.8	12.9
Floating Rate Bonds	183.1	6.3	202.5	6.3	200.4	5.6	216.6	5.3	232.6	5.1	296.5	5.8
Inflation-Linked Bonds	530.1	18.4	642.1	20.1	747.2	20.9	888.7	21.9	1,011.1	22.2	1,196.6	23.6
Fixed Rate Bonds	1,446.8	50.1	1,581.6	49.5	1,777.9	49.7	1,989.6	49.0	2,295.8	50.5	2,546.2	50.2
STRIPS of Udibonos	—	—	—	—	1.0	0.0	3.6	0.1	5.1	0.1	6.1	0.1
Other <sup>(3)</sup>	334.4	11.6	314.9	9.8	317.6	8.9	329.1	8.1	323.3	7.1	372.8	7.3
Total Gross Debt	<u>Ps.2,888.3</u>	<u>100.0%</u>	<u>Ps.3,197.7</u>	<u>100.0%</u>	<u>Ps.3,575.3</u>	<u>100.0%</u>	<u>Ps.4,063.2</u>	<u>100.0%</u>	<u>Ps.4,546.6</u>	<u>100.0%</u>	<u>Ps.5,074.0</u>	<u>100.0%</u>
<b>Net Debt</b>												
Financial Assets <sup>(4)</sup>	(79.4)		(85.6)		(74.2)		(169.3)		(222.5)		(259.9)	
Total Net Debt	<u>Ps.2,808.9</u>		<u>Ps.3,112.1</u>		<u>Ps.3,501.1</u>		<u>Ps.3,893.9</u>		<u>Ps.4,324.1</u>		<u>Ps.4,814.1</u>	
Gross Internal Debt/GDP	20.6%		20.5%		22.1%		24.2%		25.4%		26.9%	
Net Internal Debt/GDP	20.1%		19.9%		21.6%		23.2%		24.1%		25.5%	

Note: Numbers may not total due to rounding.

(1) Internal debt figures do not include securities sold by *Banco de México* in open-market operations to manage liquidity levels pursuant to *Regulación Monetaria* (none of which are outstanding since December 31, 2011). This is because the securities do not increase the Mexican Government’s overall level of internal debt. *Banco de México* must reimburse the Mexican Government for any allocated debt that *Banco de México* sells into the secondary market and that is presented to the Mexican Government for payment. If *Banco de México* undertakes extensive sales of allocated debt in the secondary market, however, this can result in an elevated level of outstanding internal debt as compared to the Mexican Government’s figure for net internal debt.

(2) Preliminary figures.

(3) Includes Ps. 103.0 billion for 2010, Ps. 171.9 billion for 2011, Ps. 169.0 billion for 2012, Ps. 165.5 billion for 2013, Ps. 161.5 billion for 2014 and Ps. 153.8 billion for 2015 in liabilities associated with social security under the ISSSTE Law, as described under “The Economy—Employment and Labor” in Mexico’s 2014 Form 18-K. This figure also includes Ps. 50 billion for Pemex’s promissory note regarding the pension liability reduction.

(4) Includes the net balance (denominated in pesos) of the Federal Treasury’s General Account in *Banco de México*.

Source: Ministry of Finance and Public Credit

*External Public Debt*

“External public sector debt” consists of the external portion of the long-term indebtedness incurred directly by the Mexican Government, the external long-term indebtedness incurred by budget-controlled agencies, the external long-term indebtedness incurred directly by productive state-owned companies, the external long-term indebtedness incurred directly or guaranteed by administratively-controlled agencies (including but not limited to national development banks) and the short-term external debt of the public sector. Private sector debt guaranteed by the Mexican Government is not included, unless and until the Mexican Government is called upon to make payment under the applicable guaranty. “External public debt” does not include, among other things, repurchase obligations of *Banco de México* with the IMF.

According to preliminary figures, at December 31, 2015, outstanding gross public sector external debt totaled U.S. \$162.2 billion, an approximate U.S. \$14.5 million increase from the U.S. \$147.7 billion outstanding at the end of 2014. Of this amount, U.S. \$159.1 billion represented long-term debt and U.S. \$3.2 billion represented short-term debt. Overall, total public debt (gross external debt plus net internal public sector debt) represented approximately 43.2% of nominal GDP, an increase of 4.6 percentage points from the end of 2014.



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The following tables set forth a summary of Mexico's external public debt, including a breakdown of such debt by currency, net external public sector debt, the Mexican Government's gross external debt, the Mexican Government's net external debt and the Mexican Government's net debt.

**Summary of External Public Debt<sup>(1)</sup>  
By Type**

	<b>Long-Term Direct Debt of the Mexican Government</b>	<b>Long-Term Debt of Budget- Controlled Agencies</b>	<b>Other Long- Term Public Debt<sup>(2)</sup></b>	<b>Total Long- Term Debt</b>	<b>Total Short- Term Debt</b>	<b>Total Long- and Short-Term Debt</b>
	<b>(in millions of U.S. dollars)</b>					
At December 31,						
2010	U.S.\$ 56,168	U.S.\$ 45,536	U.S.\$ 6,385	U.S.\$ 108,089	U.S.\$ 2,339	U.S.\$ 110,428
2011	60,590	47,436	5,625	113,651	2,769	116,420
2012	66,912	50,063	5,626	122,601	3,125	125,726
2013	71,817	53,358	5,734	130,909	3,527	134,436
2014	78,379	58,863	5,627	142,869	4,797	147,666
2015 <sup>(3)</sup>	82,493	69,621	6,943	159,057	3,152	162,209

**By Currency<sup>(4)</sup>**

	At December 31,																	
	2010			2011			2012		2013		2014		2015 <sup>(3)</sup>					
	(in millions of U.S. dollars, except for percentages)																	
U.S. Dollars	U.S.\$	90,882	82.3%	U.S.\$	97,048	83.4%	U.S.\$	105,836	84.2%	U.S.\$	111,647	83.0%	U.S.\$	121,927	82.6%	U.S.\$	131,702	81.2%
Japanese Yen		6,864	6.2		6,793	5.8		6,847	5.4		5,519	4.1		5,058	3.4		4,857	3.0
Swiss Francs		953	0.9		910	0.8		961	0.8		969	0.7		401	0.3		1,011	0.6
Pounds																		
Sterling		1,920	1.7		1,906	1.6		1,993	1.6		1,369	1.0		2,848	1.9		2,694	1.7
Euro		9,421	8.5		9,377	8.1		9,530	7.6		11,489	8.5		13,986	9.5		18,834	11.6
Others		389	0.4		385	0.3		558	0.4		3,443	2.6		3,445	2.3		3,113	1.9
Total	U.S.\$	110,428	100.0%	U.S.\$	116,420	100.0%	U.S.\$	125,726	100.0%	U.S.\$	134,436	100.0%	U.S.\$	147,666	100.0%	U.S.\$	162,209	100.0%

**Net External Debt of the Public Sector**

	At December 31,					
	2010	2011	2012	2013	2014	2015 <sup>(3)</sup>
	(in millions of U.S. dollars, except for percentages)					
Total Net Debt	U.S.\$ 104,679.1	U.S.\$ 113,631.6	U.S.\$ 121,659.0	U.S.\$ 130,949.7	U.S.\$ 145,617.4	U.S.\$ 161,609.5
Gross External Debt/GDP	9.8%	10.4%	10.1%	10.5%	12.1%	14.8%
Net External Debt/GDP	9.2%	10.12%	9.8%	10.2%	12.0%	14.7%

**Gross External Debt of the Mexican Government**

	At December 31,											
	2010		2011		2012		2013		2014		2015 <sup>(3)</sup>	
	(in millions of U.S. dollars, except for percentages)											
U.S. dollars	U.S.\$ 47,869	83.7%	U.S.\$ 51,704	84.3%	U.S.\$ 57,465	85.2%	U.S.\$ 62,285	86.3%	U.S.\$ 65,127	82.9%	U.S.\$ 66,298	80.3%
Japanese yen	3,756	6.6	3,933	6.4	4,433	6.6	3,643	5.0	3,686	4.7	3,672	4.4
Swiss francs	269	0.5	267	0.4	—	—	—	—	—	—	—	—
Pounds sterling	746	1.3	741	1.2	774	1.1	789	1.1	2,302	2.9	2,177	2.6
Euros	4,537	7.9	4,694	7.7	4,771	7.1	5,447	7.6	7,437	9.5	10,422	12.6
Others	9	0.0	14	0.0	18	0.0	16	0.0	20	0.0	19	0.0
Total	U.S.\$ 57,187	100.0%	U.S.\$ 61,352	100.0%	U.S.\$ 67,461	100.0%	U.S.\$ 72,180	100.0%	U.S.\$ 78,573	100.0%	U.S.\$ 82,588	100.0%

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**Net External Debt of the Mexican Government**

	At December 31,					
	2010	2011	2012	2013	2014	2015 <sup>(3)</sup>
	(in millions of U.S. dollars, except for percentages)					
Total Net Debt	U.S.\$ 52,339.0	U.S.\$ 59,642.5	U.S.\$ 66,016.5	U.S.\$ 69,910.4	U.S.\$ 77,352.4	U.S.\$ 82,320.3
Gross External Debt/GDP	5.1%	5.5%	5.4%	5.6%	6.4%	7.5%
Net External Debt/GDP	4.6%	5.4%	5.3%	5.5%	6.3%	7.5%

**Net Debt of the Mexican Government**

	At December 31,					
	2010	2011	2012	2013	2014	2015 <sup>(3)</sup>
External Debt	18.7%	21.1%	19.7%	19.0%	20.8%	22.7%
Internal Debt	81.3%	78.9%	80.3%	81.0%	79.2%	77.3%

Note: Numbers may not total due to rounding.

(1) External debt denominated in foreign currencies other than U.S. dollars has been translated into dollars at exchange rates as of each of the dates indicated. External public debt does not include (a) repurchase obligations of *Banco de México* with the IMF (none of which were outstanding as of July 31, 2015) or (b) loans from the Commodity Credit Corporation to public sector Mexican banks. External debt is presented herein on a "gross" basis, and includes external obligations of the public sector at their full outstanding face or principal amount. For certain informational and statistical purposes, Mexico sometimes reports its external public sector debt on a "net" basis, which is calculated as the gross debt net of certain financial assets held abroad. These financial assets include Mexican public sector external debt that is held by public sector entities but that has not been cancelled. *Banco de México's* reserves are not subtracted from gross debt.

(2) Includes development banks' debt and the debt of other administratively-controlled agencies whose finances are consolidated with those of the Mexican Government.

(3) Preliminary figures.

(4) Adjusted to reflect the effect of currency swaps.

Source: Ministry of Finance and Public Credit.

**Recent Securities Offerings**

- On January 23, 2015, Mexico issued U.S. \$1.0 billion of its 3.600% Global Notes due 2025 and U.S. \$3.0 billion of its 4.600% Global Notes due 2046. The transaction was part of a tender offer in which holders of a certain series of Mexico's outstanding U.S. dollar-denominated debt securities were allowed to tender those debt securities for cash. The notes were issued under Mexico's U.S. \$110 billion Medium-Term Notes Program.
- On March 6, 2015, Mexico issued €1.25 billion of its 1.625% Global Notes due 2024 and €1.25 billion of its 3.000% Global Notes due 2045. The notes were issued under Mexico's U.S. \$110 billion Medium-Term Notes Program.
- On April 15, 2015, Mexico issued €1.5 billion of its 4.000% Global Notes due 2115. The notes were issued under Mexico's U.S. \$110 billion Medium-Term Notes program.
- On January 21, 2016, Mexico issued U.S. \$2.25 billion of its 4.125% Global Notes due 2026. The notes were issued under Mexico's U.S. \$110 billion Global Medium-Term Notes Program.
- On February 23, 2016, Mexico issued €1.5 billion of its 1.875% Global Notes due 2022 and €1.0 billion of its 3.375% Global Notes due 2031.

**Legal and Political Reforms**
**Hydrocarbons**

On May 12, 2015, the NHC invited foreign and national entities and productive state-owned companies to participate in a bid for contracts relating to the extraction of hydrocarbons in twenty-five onshore areas. On December 15, 2015, the NHC awarded contracts for the twenty-five onshore areas. On December 17, 2015, the NHC invited foreign and national entities and state-owned companies to participate in a bid for contracts relating to the exploration and production of hydrocarbons in ten deep-water areas.

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### *Education*

In accordance with the educational objectives of the National Development Plan, the first issuance of education infrastructure certificates (CIEN Program) took place in December 2015, in order to raise capital for improving infrastructure for education. Ps. 8.6 million were raised through the issuance of local bonds maturing in 2039. The program establishes a financing mechanism whereby states can receive funds from the Multiple Contribution Fund by making commitments to use such funds for specific infrastructure projects. The issuance was widely accepted among public investors, with the participation of twenty-three institutions, including local pension funds and insurance companies. This was the first of a series of issuances expected to raise a total of Ps. 50.0 billion between 2015 and 2018.

### *UMS Budget*

Reforms to the Federal Law of Budget and Fiscal Accountability and the General Law of Public Debt, published in the Official Gazette of the Federation on August 11, 2014, established the possibility that the Mexican Government, acting through the Ministry of Finance and Public Credit, could assume a portion of PEMEX's pension liabilities, subject to certain conditions. These conditions include: within a year after the decree comes into effect, PEMEX reaches an agreement to modify the collective bargaining agreement to which PEMEX and its subsidiaries are subject; modification of the *Reglamento de Trabajo del Personal de Confianza de Petróleos Mexicanos y Organismos Subsidiarios* (Employment Regulation for White Collar Employees of PEMEX and Subsidiary Entities); and the implementation of an austerity program. Such assumed liabilities would be equivalent to a corresponding reduction in liabilities achieved through reforms to PEMEX's pension system. In December 2015, PEMEX notified the Ministry of Finance that such conditions were met. As published in the Official Gazette of the Federation on December 24, 2015, the Ministry of Finance and Public Credit issued Rules for the Government's assumption of a portion of PEMEX's pension liabilities. Those Rules called for an independent pension specialist to calculate the reduction in PEMEX's liabilities. They also called for a temporary Ps. 50,000 million promissory note, which will be exchanged in 2016 for a series of promissory notes to be issued on the basis of the pension liability reduction that is ultimately verified by the independent pension specialist.

### *Energy*

On December 24, 2015, a new energy transition law was published in the Official Gazette of the Federation. The law aims to combat climate change by promoting cleaner energy sources. The law establishes a program of clean energy certificates and sets a goal that at least 35% of the country's electricity supply must be generated from clean energy sources by 2024. Accordingly, the Law of Use of Renewable Energy and Financing of the Energy Transition and the Sustainable Use of Energy Law have been repealed.

### *Governmental Finances*

Amendments to the *Ley General de Contabilidad Gubernamental* (General Law on Governmental Accounting) and to the Federal Law of Budget and Fiscal Accountability were published in the Official Gazette of the Federation on December 30, 2015. These amendments require each state to create accounting councils in order to standardize public accounting throughout the different levels of government.

A new *Ley de Tesorería de la Federación* (Treasury of the Federation Law) became effective on January 1, 2016. This law is designed to establish the rules for the collection and management of federal funds by the Treasury of the Federation and the making of payments therewith. The law also entrusts the Treasury of the Federation with supervising persons involved in activities relating to the management of federal funds and levying fines and other penalties.

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*Access to Information and Transparency Reform*

On May 4, 2015, the *Ley General de Transparencia y Acceso a la Información Pública* (Transparency and Access to Public Information Law) was published in the Official Gazette of the Federation. A wide range of entities are subject to this law, which establishes principles and proceedings to ensure the right to access information held by any authorities, entities, governmental agencies and bodies, autonomous public bodies, trusts and public funds, as well as particular unions that receive and manage public resources or act on behalf of the Federal Government, states and municipalities.

This law includes, among others, the following features:

- Transforms the former IFAI into the new National Institute for Transparency, Access to Information and Data Protection (INAI);
- Provides for the allocation of authority among the Federal Government, states and municipalities' access to information agencies;
- Establishes consistent, simple and expeditious proceedings and conditions for access to information rights;
- Regulates the organization of the National Transparency, Access to Information and Data Protection System, and establishes the organization among its members (INEGI, National Archives and Records of the Federation, the Senior Audit Office and the state agencies responsible for initiatives related to transparency and access to information);
- Establishes that information relating to crimes against humanity and violations of human rights will not be considered classified;
- Provides that the state agencies responsible for transparency and access to information initiatives will have advisory councils comprised of academics and non-governmental organizations, each of whom will serve terms of seven years or less. These councils will have the authority to issue opinions related to the annual program of the INAI and its compliance, and to the annual budgetary program of the INAI; and
- Provides for the creation of a technology platform which will be developed, managed and implemented by the state agencies.

On May 26, 2015, a decree amending articles 25, 73, 79, 108, 116 and 117 of the Constitution was published in the Official Gazette of the Federation. The objective of the amendment is to create a new legal framework that controls the borrowing practices of the states and municipalities. Improved management of public resources and enhanced accountability at the local level are also among the primary objectives of the amendment. To this end, the amendment establishes rules that will lead to the efficient and responsible management of the borrowing practices employed by federal and local entities, with the ultimate goal of achieving sound, sustainable public finances among all three levels of government.

**Item 4A. Unresolved Staff Comments**

Not applicable.

[Table of Contents](#)**Item 5. Operating and Financial Review and Prospects****General**

We earn income from:

- export sales, which consist of sales of crude oil and condensates, petroleum products and petrochemical products;
- domestic sales, which consist of sales of natural gas, petroleum products (such as gasoline, diesel fuel and LPG) and petrochemical products; and
- other sources, including financial and investment income and insurance revenues.

Our operating expenses include:

- cost of sales, including the cost of purchases of imported petroleum and other products, depreciation and amortization, salaries, wages and benefits, a portion of the net cost of employee benefits for the period, the variation of inventories, maintenance, and exploration and unsuccessful drilling expenses;
- transportation and distribution expenses (including a portion of the net cost of employee benefits for the period); and
- administrative expenses (including a portion of the net cost of employee benefits for the period).

Our income is affected by a number of factors, including:

- changes in international prices of crude oil, petroleum products and petrochemical products, which are denominated in U.S. dollars, and domestic prices of petroleum products, which are denominated in pesos;
- the type and volume of crude oil produced and exported;
- the type and volume of natural gas produced, processed and sold domestically and internationally;
- the results of development and exploration activities;
- the amount of taxes, duties and other payments that we are required to make to the Mexican Government;
- fluctuations in the peso-U.S. dollar exchange rate; and
- Mexican and global economic conditions, including the levels of international interest rates.

**Overview**

2015 was another challenging year for us. Like the rest of the oil and gas industry, we continued to be negatively impacted by the significant decline in crude oil prices that started in the second half of 2014. During 2015 crude oil prices decreased due to abundant crude oil supply, with global oil inventories reaching historic levels as a result of increased production worldwide and lower than expected demand from important markets, such as China, Europe and the United States. Despite industry expectations that under the current price environment a realignment of crude oil supply and demand will occur, we expect that such realignment will be gradual and believe that the current volatility and depressed oil prices could prevail for a longer than expected period of time.

*Going Concern*

Our consolidated financial statements as of December 31, 2015 and 2014 have been prepared on a going concern basis, which assumes that we can meet our payment obligations. As we describe in Note 2 to our consolidated financial statements, we have experienced recurring losses from our operations and have negative working capital and negative equity, which raises substantial doubt regarding our ability to continue as a going concern. We discuss below, and in Note 2 to these consolidated financial statements, the circumstances that have caused these negative trends, as well our plans in regard to these matters. We continue operating as a going concern, and our consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

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*Redefinition of Petróleos Mexicanos as a State-Owned Productive Company within a Low Crude Oil Price Environment*

Given the low crude oil prices, our results of operations and financial condition, particularly our liquidity, have been negatively impacted. We are addressing this in two primary ways: (1) adjusting our expenditures, and (2) implementing a business strategy that redefines us as a state-owned productive company and enables us to take advantage of the opportunities made available to us by the recent energy reform in Mexico.

With respect to our expenditures, we have responded to the decline in crude oil prices with adjustments to our budget in February of last year and this year. This year, the Board of Directors of Petróleos Mexicanos approved a plan to reduce our budget by at least Ps. 100 billion, or 20.9%, in order to meet our financial balance goal for 2016, which we refer to as our 2016 Budget Adjustment Plan. The 2016 Budget Adjustment Plan responds to the expected reduction in our revenues due to low crude oil prices and is an integral part of the redefinition of Petróleos Mexicanos as a state-owned productive company in order to compete with other oil and gas companies. The 2016 Budget Adjustment Plan intends to accomplish four primary objectives:

- increasing our efficiency to become more competitive in the hydrocarbons sector in Mexico;
- focusing investment on the most profitable projects;
- fostering partnerships with the private sector for projects in which they participate strategically with us; and
- promoting greater development in those sectors where private investment can provide economic growth in Mexico.

Based on these objectives, the 2016 Budget Adjustment Plan reduces our operating expenses, is intended to increase our efficiency and defers and reassesses our capital expenditures, while minimizing, to the greatest extent possible, the impact on future crude oil and gas production. For more details regarding our liquidity condition, see “—Liquidity and Capital Resources” below in this Item 5 and for more details regarding the 2016 Budget Adjustments Plan, see “Item 4—Information on the Company—History and Development—Capital Expenditures and Investments—Capital Expenditures Budget.”

With respect to the opportunities made available to us by the recent landmark energy reform, we intend to enhance our financial flexibility by increasing committed liquidity sources and diversifying our sources of funding. Specifically, we are considering the following:

- *Strategic Alliances and Joint Ventures:* We have already identified opportunities for, and will likely participate in, joint ventures with other companies and hope that these strategic partnerships will reduce our capital commitments, as well as increase production levels, accelerate field development and enable us to gain access to new technologies and current best practices in the industry. We plan to participate with the private sector in Round One, as well as in subsequent competitive bidding rounds, when we are competitive.
- *Monetization of Non-Strategic Assets:* We are considering opportunities to monetize our transportation and storage infrastructure while maintaining operational control. As part of this process we are exploring opportunities to create one or several issuing trusts commonly known as “FIBRA E’s,” which are new publicly-traded vehicles similar to the master limited partnerships traded in the United States, that hold assets primarily related to the transportation and storage of hydrocarbons. We are also considering the divestment of non-strategic assets.
- *Migration of Existing Contracts:* We are taking the necessary steps to migrate certain of our Integrated E&P Contracts, our FPWCs and some of our assignments we received as part of Round Zero into the new contractual framework established under the Hydrocarbon Law, which may enable us to improve these projects’ profitability and their fiscal terms.

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### *Mexican Government Support*

In addition to the 2016 Budget Adjustment Plan, the Ministry of Finance and Public Credit announced on April 13, 2016 the following two additional support mechanisms to provide us with a total capital injection of Ps. 73.5 billion, as described below.

- a capital contribution of Ps. 26.5 billion, which was received on April 21, 2016;
- Ps. 47.0 billion of short-term Mexican government debt securities, which we will receive later this year in exchange for the Ps. 50.0 billion promissory note issued to us by the Mexican Government last year. See “Item 4—Information on the Company—History and Development—Energy Reform—Pension Liabilities” and “Item 6—Directors, Senior Management and Employees—Employees.”

As a condition to receiving this additional support, we must reduce our liabilities with suppliers and contractors by the same amount—Ps. 73.5 billion in 2016.

Furthermore, the Mexican Government announced that it modified the fiscal regime applicable to us to enable us to deduct more of our exploration and production costs. Under the current low oil price environment, we estimate (based on a price of crude oil at U.S.\$25.00 per barrel) that this will reduce the amount of taxes we will have to pay for the year ended December 31, 2016 by approximately Ps. 50.0 billion. If prices of crude oil increase, we would be able to take greater deductions. For more information see “Item 4—Information on the Company—Taxes and Duties and other Payments to the Mexican Government—Fiscal Regime for PEMEX.”

The foregoing support mechanisms, together with the Ps. 15 billion credit line provided to us in March 2016 by Mexican development banks—*Banco Nacional de Obras y Servicios Públicos, S.N.C., Institución de Banca de Desarrollo; Nacional Financiera, S.N.C., Institución de Banca de Desarrollo; and Banco Nacional de Comercio Exterior, S.N.C., Institución de Banca de Desarrollo*—will allow us to reduce our short term liabilities with suppliers and contractors.

### *Results of operations and financial condition in 2015*

The decline in crude oil prices had a direct effect on our results of operations and financial condition for the year ended December 31, 2015, and the continuation of prices at or around these levels or future declines in international crude oil and natural gas prices will have similar effects. For the year ended December 31, 2015, we had a net loss of Ps. 712.6 billion (U.S. \$41.4 billion). This increase in net loss was primarily explained by: (1) a Ps. 455.3 billion increase in impairment of fixed assets, which was mainly due to the decrease in future cash flows as a result of lower hydrocarbon prices; (2) a Ps. 420.4 billion decrease in sales mainly due to a decrease in the Mexican crude oil export price and domestic sales prices and decrease in our crude oil production; (3) a Ps. 77.8 billion increase in foreign exchange loss; (4) a Ps. 39.9 billion decrease in other revenues, net; and (5) a Ps. 16.2 billion increase in financing costs, net. This increase was partially offset by a Ps. 414.6 billion decrease in taxes and duties and a Ps. 184.3 billion decrease in the net periodic cost of employee benefits following modifications to our pension regime.

In 2015, our equity decreased by Ps. 564.0 billion from negative Ps. 767.7 billion as of December 31, 2014 to negative Ps. 1,331.7 billion as of December 31, 2015. For more information on our equity decrease, see “— Liquidity and Capital Resources—Equity Structure and Mexican Government Contributions” below. This decrease was primarily caused by the net loss described above and an increase in financial debt, and was partially offset by a reduction in reserves for employee benefits and by the Mexican Government’s assumption of a portion of our pension liabilities with a Ps. 50.0 billion promissory note issued to us, which we recognized as long-term account receivable and Mexican Government equity contribution. This assumption was a result of our successful renegotiation of our pension agreement with the Petroleum Workers’ Union in 2015 as part of our effort to modernize our pension regime and reduce our pension liabilities. The new agreement reduced our pension liabilities by approximately Ps. 196.0 billion. For more information regarding our pension agreements, see “Item 6—Directors, Senior Management and Employees—Employees” and “Item 4—History and Development—Recent Energy Reform—Pension Liabilities.”

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The decline in crude oil prices has also negatively impacted our liquidity, and we are facing short-term financial difficulties. During 2015, our net funds from operating activities totaled Ps. 102.3 billion, as compared to net funds from operating activities of Ps. 134.4 billion in 2014. Because of the decrease in net funds from operating activities, we were forced in 2015 to rely more heavily on our financing activities. Our net cash flows from financing activities totaled Ps. 134.9 billion in 2015, as compared to net cash flows of Ps. 117.1 billion used in financing activities in 2014. One of the most critical problems we continue to face is our accounts payable to suppliers. As of December 31, 2015, we owed our suppliers approximately Ps. 167.3 billion. However, we and the Mexican Government have adjusted investment, taxation and financing plans to address this issue, as described above.

*Operating Challenges*

Notwithstanding our exploration and development efforts in shallow and deep waters that we carried out in 2015 and the new techniques and strategies we applied to improve the timeline for the completion and drilling of new wells, during 2015 our crude oil production totaled 2,266.8 thousand barrels per day, a decrease of 161.9 thousand barrels per day, or 6.7%, as compared to 2014. This decline was primarily a result of the natural decline of some of our fields, particularly production at the fields located in the Cantarell business unit. We describe the reasons for this decline under “Item 4—Information on the Company—Business Overview—Exploration and Production—Crude Oil and Natural Gas Production.”

Despite the fact that the total crude oil we processed in 2015 decreased by 7.8% to 1,064.5 thousand barrels per day, the ratio of heavy crude oil to total crude oil processed increased by 2.2 percentage points, which was a result of our strategy to maximize the utilization of high conversion and coking units and to improve the yields of intermediate distillates. Although we had a decrease in crude oil processing and our petroleum products output, our variable refining margin increased by 75% due to an increase in the unit contribution margin of U.S. \$1.59 per barrel, primarily as a result of the increase in industry margins and the improvement of certain operating variables, such as the effective use of intermediate streams, processing of a heavier crude oil mix and better yields in intermediate distillates.

*Benefits from Energy Reform*

Despite the negative results we obtained in 2015, we remain optimistic that we will gradually benefit from the energy reforms implemented in 2014. We continue to develop the reserves that were assigned to us pursuant to Round Zero and continue to assess the opportunities presented by the Round One bidding process, including the opportunity to form new strategic partnerships to enhance our financial, technical and operational capabilities along the entire value chain. We have implemented the corporate reorganization plan, which we believe will enable us to operate more efficiently. This reorganization involved the merger of our natural gas, refining and petrochemicals business units into the new subsidiary entity called Industrial Transformation, and the creation of five new subsidiaries to focus on drilling, logistics, cogeneration of steam and power, fertilizers and ethylene production.

As we noted above, in 2015 we achieved a historic milestone by concluding the negotiations and modification of our pension regime, which reduced our pension liabilities by approximately Ps. 196.0 billion. During 2016, we will focus on introducing a voluntary migration process for our current union employees in order to transition them to a defined contribution plan, which could yield additional savings for us. In addition, the Mexican Government may assume a portion of our pension liabilities in an amount equivalent to the reduction in our pension liabilities, once that amount is reviewed by an independent expert. Any resources that we may receive from the Mexican Government arising from its assumption of our pension liabilities will be used exclusively for pension liability payments. We have already received a contribution of Ps. 50.0 billion from the Mexican Government (see Note 21(a) to our consolidated financial statements included herein).



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**Table of Contents***Near Future*

The recent energy reform, together with the 2016 Budget Adjustment Plan, enabled us to redefine ourselves as a productive state-owned company and provides us with clear guiding principles with respect to the efficient allocation of resources and value maximization. In addition, as described above, it provides us with mechanisms to stabilize and increase our production, add additional reserves and improve our fiscal regime. As a result, it offers us an opportunity to make PEMEX more competitive and efficient.

As a productive state-owned company, our business model contemplates maximizing value for Mexico and, accordingly, we intend to focus on high-yield projects with growth potential. Every action taken under our business plan will be directed towards the efficient allocation of resources, developing profitable businesses and considering the development of new businesses with third parties.

Going forward, our budget planning and execution will be based on conservative forecasts that enhance our redefinition as a productive state-owned company. We intend to take advantage of all the opportunities made available to us by the recent energy reform in order to stabilize production, gradually reduce our leverage and obtain additional revenues from the sale of non-strategic assets.

**Critical Accounting Policies**

Some of our accounting policies require the application of estimates, judgments and assumptions by management which affect the reported amounts of assets and liabilities as of the date of our financial statements, as well as the reported amounts of revenues and expenses during the periods presented in this report. By their nature, these estimates, judgments and assumptions are subject to a degree of uncertainty and are based on: our historical experience; terms of existing contracts; management's view of trends in the oil and gas industry, both internationally and within Mexico; economic factors in Mexico; and information from outside sources. We believe that the following critical accounting policies, among others, affect management's judgments and estimates used in the preparation of our consolidated financial statements according to IFRS, and could potentially impact our financial results and future financial performance. There can be no assurance that actual results do not differ from these estimates. These policies are more fully described in Note 3 to our consolidated financial statements included herein.

*Successful Efforts Method of Oil and Gas Accounting*

We apply the successful efforts method for the exploration and production of crude oil and gas activities, considering the criteria mentioned in IFRS 6, "Exploration for and Evaluation of Mineral Resources," in relation to the recognition of exploration and drilling assets. Costs of development wells and related plant, property and equipment involved in the exploitation of oil and gas are recorded as part of the cost of assets. The costs of exploratory wells in areas that have not yet been designated as containing proved reserves are recorded as intangible assets until it is determined whether such reserves are commercially viable. Otherwise, the costs of drilling an exploratory well are charged to exploration expense. Other expenditures on exploration are charged to exploration expense, as incurred.

Depreciation and amortization of capitalized costs associated with wells are based on the estimated commercial life of the field to which the well corresponds, taking into account the relationship between the field's production levels for the period and proved developed reserves, as of the beginning of the year and as updated on a quarterly basis for new development investments.

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Reserves estimates are determined in accordance with earth science and petroleum engineering principles and practices pursuant to Rule 4-10(a) and can vary as a result of changes in such factors as forecasted oil and gas prices, reservoir performance and developments in oil field technology.

Downward revision of reserves estimates can result in: higher depreciation and depletion expense per barrel in future periods; an immediate write-down of an asset's book value in accordance with accounting rules for the impairment of properties; or changes in our accrual of the asset retirement obligation. An impairment of oil and gas producing fixed assets will result if the downward revisions are so significant that the estimated future cash flows from the remaining reserves in the field are insufficient to recover the unamortized capitalized costs. Conversely, if the oil and gas reserves quantities are revised upward, our per barrel depreciation and depletion expense will be lower.

The application of successful efforts accounting can also cause material fluctuations between periods in exploration expenses if drilling results are different than expected or if we change our exploration and development plans. The determination that exploratory drilling was unsuccessful in finding economically producible reserves requires the immediate expensing of previously capitalized drilling costs. We make periodic assessments of the amounts included within intangible assets to determine whether capitalization is initially appropriate and should continue. Exploration wells capitalized beyond 12 months are subject to additional evaluation as to whether the facts and circumstances have changed, and therefore whether the conditions described below no longer apply. Exploration wells more than 12 months old are expensed unless: they are in an area requiring major capital expenditures before production can begin, commercially productive quantities of reserves have been found, and they are subject to further exploration or appraisal activity, in that either drilling of additional exploratory wells is underway or firmly planned for the near future; or proved reserves are identified within 12 months following the completion of exploratory drilling.

***Environmental Remediation and Asset Retirement Obligations***

We are required to make judgments and estimates in recording liabilities for environmental cleanup and asset retirement obligations. In accordance with applicable legal requirements and accounting practices, we recognize an environmental liability when the cash outflows are probable and the amount is reasonably estimable. We account for disbursements related to the conservation of the environment that are linked to revenue from current or future operations as costs or assets, depending on the circumstances of each disbursement. Moreover, we account for disbursements related to past operations, which no longer contribute to current or future revenues, as current period costs. We accrue a liability for a future disbursement when an obligation related to environmental remediation is identified and the amount thereof can be reasonably estimated.

Estimated liabilities for environmental remediation and asset retirement obligations are subject to change as a result of: changes in laws, regulations and their interpretation; the review of additional information on the extent and nature of site contamination; the determination of additional works that need to be undertaken; improvements in technology; the nature and timing of expenditure; foreign currency exchange rates to the extent that some of these costs are incurred in U.S. dollars; and changes in discount rates.

We do not recognize the obligations related to the costs of future retirement of assets associated with the principal refining processes for gas and petrochemicals. These assets are considered to have an indefinite useful life due to the potential for maintenance and repairs, and, accordingly, we lack sufficient information to reasonably determine the date on which they will be decommissioned.

***Financial Instruments***

We face market risk caused by the volatility of hydrocarbon prices, exchange rates and interest rates. In order to monitor and manage this risk, Petróleos Mexicanos and the subsidiary entities have developed policies and guidelines that promote an integrated scheme for market risk management, regulate the use of DFIs, guide the development of hedging strategies and provide strategies for the formulation of risk limits.

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We enter into derivatives transactions with the sole purpose of hedging financial risks related to our operations. Nonetheless, some of these transactions do not qualify for hedge accounting treatment because they do not meet the strict requirements of IAS 39, "Financial Instruments Recognition and Measurement" for designation as hedges. They are therefore recorded in the financial statements as non-hedge instruments or as instruments entered into for trading purposes, despite the fact that their cash flows are offset by the cash flows of the positions to which they relate. As a result, the changes in their fair value are recognized in the financing cost. See Notes 10 and 15 to our consolidated financial statements included herein.

### *Impairment of Non-Financial Assets*

At each reporting date, we evaluate whether there is objective evidence that non-financial assets are impaired. Significant judgment is required to appropriately assess the recoverable amount, represented by the higher of the value in use and the fair value, less costs to sell, of our reporting units. Our future net cash flow projections are based on the best available estimates of the cash-generating unit income and expenses using forecasts, prior results and the outlook for the business's performance and the market's development. Our annual budget and business plan set macroeconomic forecasts for each of the cash-generating units, which are calculated based on different assumptions regarding projected commodity sales prices, volume of production and overhead costs, foreign currency exchange rates and inflation, among other items, that are used to quantify income and expense estimates. Any change in the assumptions upon which the forecasts for each cash-generating unit are based can materially affect the anticipated cash flows to be generated by non-financial assets.

These estimated future net cash flows are discounted at present value using cash-generating unit specific discount rates determined as a function of the currency in which their respective cash flows are denominated and the risks associated with these cash flows. The discount rates are intended to reflect current market assessments of the time value of money and the risks specific to the asset. Accordingly, the various discount rates used take into consideration country risk. To ensure that the calculations are consistent and avoid double counting, the cash flow projections do not factor in risks that have already been built into the discount rates used. The discount rates used reflect current market conditions and specific risks related to those fixed assets. See Note 3(i) to our consolidated financial statements included herein.

As of December 31, 2015, we have carried out an impairment test to assess the carrying amount of non-financial assets, other than inventories and deferred taxes. The impairment test has resulted in an impairment charge of Ps. 477.9 billion, primarily related to (1) wells in the Aceite Terciario del Golfo, Cantarell, Crudo Ligerio Marino and Burgos projects, and (2) the redefinition of the cash-generating units of the refining segment from a national refinery system to the following separate refineries: Cadereyta, Minatitlán, Salamanca, Salina Cruz, Madero and Tula, which resulted in an impairment charge for the cash-generating units of Madero and Minatitlán. For more information see Notes 3(i) and 12(d) to our audited consolidated financial statements included herein. Pursuant to the *Lineamientos que regulan el procedimiento de cuantificación y certificación de reservas de la Nación y el informe de los recursos contingentes relacionados* (Guidelines that regulate the quantification and certification procedure of the Mexican reserves and the reporting of related contingent resources) published in the Official Gazette of the Federation by NHC on August 13, 2015, the reserves used for our impairment computation were calculated based on the contractual limit, which was 19 years as of December 31, 2015. However, on April 15, 2016, the NHC published a modification to these guidelines allowing us to base the computation of our reserves on their economic limit instead of their contractual limit, which may have a positive effect on our anticipated future cash flows to be generated by non-financial assets.

### *Income Taxes*

As described under "Item 4—Information on the Company—Taxes, Duties and Other Payments to the Mexican Government" above and in Note 20 to our consolidated financial statements included herein, the fiscal regime applicable to Petróleos Mexicanos and the subsidiary entities and certain subsidiary companies as of December 31, 2015 became effective on January 1, 2015. Effective as of this date, the Hydrocarbons Revenue Law and the Federal Revenue Law of the applicable year comprise the fiscal regime applicable to us.

As of December 31, 2015, Petróleos Mexicanos and the subsidiary entities are required to estimate taxable income according to IAS 12, "Income Taxes." This process involves an estimation of our actual current tax and an assessment of temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred assets and liabilities, which are included within our consolidated balance sheet. We must then assess the likelihood that our deferred assets will be recovered from future taxable income.

Management judgment is required in determining our provision for income taxes. In the event that actual results differ from our estimates, any adjustments recorded will affect our net income during the corresponding period.

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### *Exploration and Production Taxes and Duties*

The fiscal regime applicable to the exploration and production assignments granted to us by the Mexican Government includes the following taxes and duties:

- *Profit-Sharing Duty.* The Profit-Sharing Duty is calculated based on the value of hydrocarbons produced in the relevant area minus certain permitted deductions. As of January 1, 2015, the applicable rate of this duty was 70%. Pursuant to the Hydrocarbons Revenue Law, the Profit-Sharing Duty decreases on an annual basis and as of January 1, 2019, it is expected to be set at 65%.
- *Hydrocarbons Extraction Duty.* The Hydrocarbons Extraction Duty is calculated based on a rate that varies according to (i) the type of hydrocarbon (e.g., crude oil, associated natural gas, non-associated natural gas or condensates), (ii) the volume of production and (iii) the relevant market price.
- *Exploration Hydrocarbons Duty.* The Exploration Hydrocarbons Duty is calculated by applying a quote per square kilometer for each assigned phase of production and extraction phase. Pemex Exploration and Production must make monthly payments of this duty. The Mexican Government is entitled to collect a monthly payment of Ps. 1,150 per square kilometer of non-producing areas. After 60 months, this tax increases to Ps. 2,750 per square kilometer for each additional month that the area is not producing. These amounts will be updated on an annual basis in accordance with the national price index.

### *Contingencies*

In the ordinary course of business, we are named in a number of lawsuits of various types. We evaluate the merit of each claim and assess the likely outcome. Liabilities for loss contingencies are recorded when it is probable that a liability has been incurred and the amount thereof can be reasonably estimated. We do not recognize contingent revenues, earnings or assets until their realization is assured. We have not recorded provisions related to ongoing legal proceedings whenever we do not expect an unfavorable resolution in such proceedings, except as disclosed in “Item 8—Financial Information—Legal Proceedings—Civil Actions” and Notes 6 and 25 to our consolidated financial statements included herein.

### *Employee Benefits*

As described under “Item 6—Directors, Senior Management and Employees—Employees” below and in Note 17 to our consolidated financial statements included herein, until December 31, 2015, we only operated a defined benefit pension plan. Our contributions related to the defined benefit pension plan are made to a fund that is administrated separately. We recognize the cost for the defined benefit plan based on independent actuarial computations applying the projected unit credit method. Actuarial gains and losses are recognized within other comprehensive results for the period in which they occur. The costs of prior services are recognized within profit or loss for the period in which they are incurred. Our net obligation with respect to the defined benefit plan equals the present value of the defined benefit obligation less the fair value of plan assets. The value of any asset is limited to the present value of available reimbursements and reductions in future contributions to the plan. In addition, seniority premiums payable for disability are recognized within other long-term employee benefits. Termination benefits are recognized in profit or loss for the period in which they are incurred.

Benefits to employees were approximately 41.2% and 50.9% of our total liabilities as of December 31, 2015 and 2014, respectively, and any adjustments recorded will affect our net income and/or comprehensive net income during the corresponding period.

As of January 1, 2016, in accordance with the pension agreement that we renegotiated with the Petroleum Workers’ Union in 2015, we also operate a defined contribution plan, in which we and each individual employee contribute to the employee’s individual account.

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**Recently Issued Accounting Standards**

Notes 3(t) and 3(u) to our audited consolidated financial statements discuss new accounting interpretations and revisions under IFRS that apply to annual periods beginning on or after January 1, 2015. There are no additional standards, amendments or interpretations that, even though not yet effective, could have a material impact on our consolidated financial statements included in this report.

**Sales Volumes and Prices**

The profitability of our operations in any particular accounting period is directly related to the sales volume of, and average realized prices for, the crude oil and natural gas that we sell. These average realized prices for crude oil and natural gas fluctuate from one period to another due to world market conditions and other factors.

*Export Volumes and Prices*

Pemex Exploration and Production sells crude oil to PMI, which then sells it to international clients. The volume of crude oil that we export is the volume delivered to international clients as adjusted for water content according to the bill of lading and standard market practice. PMI bases crude oil export price formulas on a basket of international reference prices and a constant set according to specific market conditions. We determine export prices of refined products, petrochemicals and natural gas by reference to market conditions and direct negotiations with our clients.

Significant changes in international crude oil prices directly affect our financial results. The impact of changes in crude oil prices on our refining activities and petrochemicals business depends on:

- the magnitude of the change in crude oil prices;
- how quickly petroleum and petrochemical product prices in international markets adjust to reflect changes in crude oil prices; and
- the extent to which prices in Mexico, where we sell most of our petroleum products and petrochemicals, reflect international prices for those products.

The following table sets forth the weighted average market price per barrel of crude oil that PMI received from exports and the average price of its benchmark, West Texas Intermediate (or WTI) crude oil, for the years indicated. Between 2011 and 2013, the average prices of crude oil that we exported were higher than the average prices of WTI crude oil. As of December 31, 2014 and 2015, however, the average price of crude oil that we exported fell below the average price of WTI crude oil, primarily due to the strengthening of the WTI crude oil against the prices of certain benchmark crudes, such as West Texas Sour, Light Louisiana Sweet and Brent Dated, and against the price of high sulfur fuel oil, upon which the pricing formulas for our crude oil are based. See “Item 4—Information on the Company—Business Overview—International Trading.”

	Year ended December 31,				
	2011	2012	2013 (in dollars per barrel)	2014	2015
West Texas Intermediate crude oil average price	U.S. \$ 95.04	U.S. \$ 94.13	U.S. \$ 97.90	U.S. \$ 93.28	U.S. \$ 48.71
PEMEX crude oil weighted average export price	101.13	101.82	98.46	86.00	43.39

Note: The numbers in this table are daily average prices for the full year, which differ from spot prices at year end. On May 9, 2016, the spot price for West Texas Intermediate crude oil was U.S. \$43.44 per barrel and the spot price for the PEMEX crude oil basket was an estimated U.S. \$56.01 per barrel.

Sources: PMI operating statistics and Platt's U.S. Marketscan (McGraw-Hill Company).

*Domestic Prices*

Until December 31, 2015, the formulas used to determine prices for petroleum products and petrochemical products sold in the Mexican market were determined by the Ministry of Finance and Public Credit and the Energy Regulatory Commission, in

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accordance with the Federal Public Administration Organic Law, as amended, the *Ley de Planeación* (Planning Law), the *Reglamento Interior* (Internal Regulations) of the Ministry of Finance and Public Credit and the *Ley de la Comisión Reguladora de Energía* (Energy Regulatory Commission Law). The Ministry of Finance and Public Credit and the Energy Regulatory Commission received input from us and other governmental ministries through committees composed of officers of *Petróleos Mexicanos*, the subsidiary entities, some of the subsidiary companies, and representatives of various government ministries, including, among others, the Ministry of Finance and Public Credit, the Ministry of Energy, the *Secretaría de la Función Pública* (Ministry of Public Function, or the SFP) and the *Secretaría de Economía* (Ministry of Economy). The Ministry of Finance and Public Credit and the Energy Regulatory Commission determined wholesale and first-hand sale prices based on opportunity cost, which considers international prices, and makes adjustments to reflect transportation expenses and differences in the quality of our products relative to international benchmarks. The retail price was determined based on the wholesale price plus the value added tax, the retailer's margin and freight costs. The Ministry of Finance and Public Credit adjusted prices for petroleum and petrochemical products sold in the Mexican market, so that they are consistent with the Mexican Government's macroeconomic targets.

As a part of the recent energy reform, domestic fuel prices are to be liberalized and to be determined according to market forces by 2018. During 2016 and 2017, domestic fuel prices will be allowed to vary within a specific range determined by the Mexican Government based on the references points set in 2015 and taking into account international benchmarks. For further information on domestic prices see "Item 4—Information on the Company—Business Overview—Refining—Pricing Decrees" and "—Gas and Basic Petrochemicals—Pricing Decrees."

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The following table compares the average prices in nominal terms of petroleum products in Mexico and in the United States for the years indicated.

	2011		2012		2013		2014		2015	
	Mexico	U.S.	Mexico	U.S.	Mexico	U.S.	Mexico	U.S.	Mexico	U.S.
<b>Petroleum Products</b>										
Unleaded regular gasoline <sup>(1)</sup>	U.S. \$ 118.55	U.S. \$ 140.36	U.S. \$ 131.36	U.S. \$ 145.42	U.S. \$ 143.36	U.S. \$ 139.70	U.S. \$ 153.16	U.S. \$ 132.21	U.S. \$ 135.94	U.S. \$ 91.18
Premium gasoline <sup>(1)</sup>	132.67	152.62	139.82	159.03	150.46	156.82	161.52	152.23	144.15	114.42
Diesel <sup>(1)</sup>	123.15	154.25	135.95	159.89	147.85	158.62	159.37	152.72	144.25	114.11
Jet fuel <sup>(2)</sup>	126.53	126.15	137.29	129.08	124.55	123.11	115.54	113.94	70.08	64.67
Kerosene <sup>(3)</sup>	123.16	125.84	135.96	128.37	147.85	122.78	159.37	113.25	142.25	64.07
Natural Gas <sup>(4)</sup>										
Industrial	4.98	5.13	3.65	3.88	5.27	4.64	5.70	5.53	3.38	3.81
Residential	15.89	11.03	12.73	10.65	15.22	10.32	15.71	10.97	12.14	12.27
<b>Selected Petrochemicals</b>										
Ammonia <sup>(5)</sup>	496.17	533.62	530.77	562.83	453.92	505.16	451.93	494.33	397.69	361.48
Polyethylene L.D. <sup>(6)</sup>	1,834.27	1,624.92	1,667.72	1,447.47	1,701.00	1,493.94	1,928.41	1,632.48	1,531.95	1,235.44
Polyethylene H.D. <sup>(7)</sup>	1,588.15	1,365.56	1,576.48	1,359.29	1,660.18	1,438.83	1,855.88	1,570.89	1,485.01	1,189.62
Styrene <sup>(8)</sup>	1,728.37	1,511.64	1,825.91	1,559.16	1,991.57	1,706.27	1,839.24	1,678.04	1,170.08	1,144.37

- 1) In U.S. dollars per barrel. Prices to final consumers including taxes. Premium price in Mexico City. U.S. prices in Houston, Texas.  
*Sources for data accompanying note (1): Ministry of Finance and Lundberg Retail Price Survey (Lundberg Survey Inc.). As of January 1, 2016, prices for two new designations established by the Mexican Government are included in the calculation of unleaded regular gasoline prices: (i) lower than 92 octane gasoline (previously designated as unleaded regular) and (ii) greater than or equal to 92 octane gasoline (previously designated unleaded premium).*
- (2) In U.S. dollars per barrel. Mexican prices at the gate of the refineries. U.S. spot prices in Houston, Texas (Jet Fuel Gulf Coast Waterborne).  
*Sources for data accompanying note (2): Retail Prices Management of Pemex Industrial Transformation and Platt's U.S. Marketscan (McGraw-Hill Company).*
- (3) In U.S. dollars per barrel. In both countries, prices to final consumers. Mexico prices include taxes, while U.S. prices exclude taxes.  
*Sources for data accompanying note (3): Retail Prices Management of Pemex Industrial Transformation and Petroleum Marketing Monthly, published by the Energy Information Administration (Kerosene Type Jet Fuel, end users).*
- (4) In U.S. dollars per thousand cubic feet. Including taxes. Industrial natural gas prices for Mexico are estimated national average first-hand sales prices for the industrial sector. Industrial natural gas prices for the United States are national average prices for industrial users. Residential natural gas prices for Mexico are estimated national average prices for end-users. Residential natural gas prices for the United States are national average prices for end-users.  
*Sources for data accompanying note (4): Retail Prices Management of Pemex Industrial Transformation, Energy Regulatory Commission and Natural Gas Navigator, published by the Energy Information Administration.*
- (5) In U.S. dollars per ton. Prices exclude taxes. Mexican basis prices at Cosoleacaque Petrochemical Plant. Spot prices for the Caribbean.  
*Sources for data accompanying note (5): Pemex Industrial Transformation, Fertecon Ammonia Report and Argus FMB Ammonia.*
- (6) In U.S. dollars per ton. PX 20020 P quality. Prices exclude taxes. Mexico prices to end consumers. U.S. prices are for exports.  
*Sources for data accompanying note (6): Retail Prices Management of Pemex Industrial Transformation and ICIS-Pricing.*
- (7) In U.S. dollars per ton. PADMEX 65050 quality. Prices exclude taxes. Mexico prices to end consumers. U.S. prices are for exports.  
*Sources for data accompanying note (7): Retail Prices Management of Pemex Industrial Transformation and ICIS-Pricing.*
- (8) In U.S. dollars per ton. Prices exclude taxes. Mexico prices to end consumers. U.S. reference prices are an average of contract and spot prices.  
*Sources for data accompanying note (8): Retail Prices Management of Pemex Industrial Transformation and ICIS-Pricing.*

**IEPS Tax, Hydrocarbon Duties and Other Taxes**

The following table sets forth the taxes and duties that we recorded for each of the past three years.

	Year ended December 31,		
	2013	2014	2015
		(in millions of pesos) <sup>(1)</sup>	
Hydrocarbon extraction duties and others	Ps. 857,356	Ps. 760,912	Ps. 377,087
Hydrocarbons income tax	3,788	(18,735)	—
Income tax	3,752	3,898	(45,587)
IEPS tax <sup>(2)</sup>	—	—	—
Total	<u>Ps. 864,896</u>	<u>Ps. 746,075</u>	<u>Ps. 331,500</u>

Note: For a description of these taxes and duties, see “Item 4—Information on the Company—Taxes, Duties and Other Payments to the Mexican Government.”  
Numbers may not total due to rounding.

(1) Figures are stated in nominal pesos.

(2) During 2013, 2014 and 2015 no IEPS tax was generated due to negative IEPS tax rates, as explained below.

Source: PEMEX's audited financial statements, prepared in accordance with IFRS.

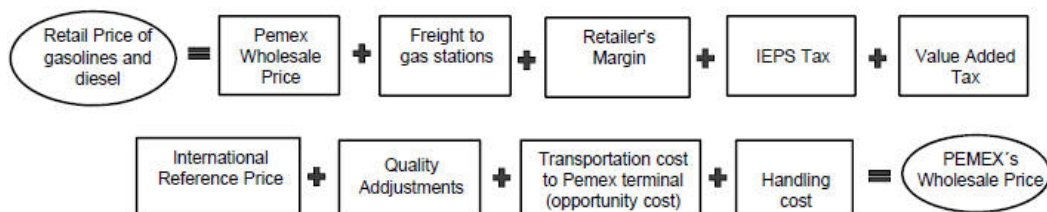


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The IEPS tax ensures that we retain the portion of our sales revenues that represents the adjusted international reference prices of our products, and the Mexican Government receives the difference between the domestic retail prices, which are prices that are set by the Mexican Government based on target rates of inflation, and the adjusted international reference prices of diesel and gasoline. The Ministry of Finance and Public Credit determines retail prices of gasoline and diesel before the beginning of each fiscal year in conjunction with the preparation of the Mexican Government's budget for that year.

Our retail prices for gasoline and diesel reflect the addition of the IEPS tax when the IEPS tax rate is positive, as well as the value added tax.

For automotive fuels, the IEPS tax is equal to (a) the retail price at which gasoline and automotive diesel are sold to retailers, less (b) value-added tax, less (c) Pemex Industrial Transformation's wholesale price, less (d) freight to gas stations and less (e) retailer's margin.



When international prices increase, our wholesale price will increase and, as a result, the IEPS tax that we collect from consumers and transfer to the Mexican Government will decrease, since the retail prices of gasoline and diesel are fixed.

From the end of 2005 through April 2015, the retail prices of gasoline and diesel have been less than the sum of Pemex-Refining's wholesale price, the value-added tax, the freight to gas stations and the retailer's margin, which has generated a "negative" IEPS tax rate, and, therefore, no IEPS tax was paid during these years. From 2006 to 2014 for the applicable year, the Federal Revenue Law established that PEMEX was permitted to credit negative IEPS taxes against its IEPS tax liability. Any remaining surplus could then be credited first toward its value added tax liability and then toward ordinary hydrocarbon duties. These IEPS tax credits are recorded in our income statement under "other revenues." In 2014, we were permitted to credit Ps. 43.1 billion of negative IEPS tax, of which we credited Ps. 40.3 billion against our IEPS tax and value added tax liabilities. As of January 1, 2015, the Federal Revenue Law no longer allows us to credit negative IEPS taxes against any tax or liability. As a result, no such amounts were recorded as "other revenues" during 2015.

As of January 1, 2016, the IEPS tax is collected by Pemex Industrial Transformation on domestic sales of gasoline and diesel on behalf of the Mexican Government. The amount of this tax depends on the class of fuel and is fixed monthly by the Ministry of Finance and Public Credit.

## Relation to the Mexican Government

Petróleos Mexicanos and the subsidiary entities are public entities of the Mexican Government, rather than Mexican corporations. Therefore, we do not have the power to issue shares of equity securities evidencing ownership interests and are not required, unlike Mexican corporations, to have multiple shareholders. However, our financing obligations do not constitute obligations of and are not guaranteed by the Mexican Government. The President of Mexico appoints five of the ten members of the Board of Directors of Petróleos Mexicanos as representatives of the Mexican Government, including the Secretary of Energy, who serves as the Chairperson of the Board of Directors of Petróleos Mexicanos, and the Secretary of Finance and Public Credit. The President of Mexico also appoints five independent members to the Board of Directors of Petróleos Mexicanos, whose appointments are ratified by the Senate.

Pursuant to the Petróleos Mexicanos Law, the consolidated annual budget of Petróleos Mexicanos and the subsidiary entities, including our financing program, must be submitted to the Ministry of Finance and Public Credit, which has the authority

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to adjust our financial balance goal and the ceiling on our wage and salary expenditures for the fiscal year. The Mexican Government incorporates our consolidated annual budget and financing program into its budget, which the Chamber of Deputies must approve each year. The Mexican Congress has the authority to adjust our annual financial balance goal at any time by amending the applicable law. In addition, any adjustment proposed by the Board of Directors of Petróleos Mexicanos to change our annual financial balance goal or increase the limit on our wage and salary expenditures or our financing program must be approved by the Chamber of Deputies.

### **Inflation**

Mexico experienced high inflation during the 1980s. The annual rate of inflation (as measured by the change in the NCPI) decreased from a high of 159.2% in 1987 to 11.9% in 1992, 8.0% in 1993 and 7.1% in 1994. However, the economic events that followed the devaluation of the peso against the U.S. dollar in late 1994 and 1995, along with turbulence in international financial markets, caused inflation to increase to 52.0% in 1995. After 1995, inflation decreased to 27.7% in 1996 and 15.7% in 1997. The annual inflation rate was 3.6% in 2009, 4.4% in 2010, 3.8% in 2011, 3.6% in 2012, 4.0% in 2013, 4.1% in 2014 and 2.1% in 2015.

We do not use inflation accounting, unless the economic environment in which we operate qualifies as “hyperinflationary,” as defined by IFRS. In accordance with IFRS, the threshold for considering an economy hyperinflationary, and consequently, adjusting certain line items in the financial statements for inflation, is reached when the cumulative three-year inflation rate is 100% or more. Because the economic environment in the three-year periods ended December 31, 2013, 2014 and 2015 did not qualify as hyperinflationary, we did not use inflation accounting to prepare our consolidated financial statements as of December 31, 2013, 2014 and 2015 included herein.

### **Consolidation**

Our financial statements consolidate the results of Petróleos Mexicanos, the subsidiary entities and the subsidiary companies. Certain non-material subsidiary companies are not consolidated and are accounted for under either the cost method or the equity method. For a list of the consolidated subsidiary companies, see Note 3(a) and Note 5 to our consolidated financial statements included herein.

### **Export Agreements**

Though Mexico is not a member of OPEC, it has periodically announced increases and decreases in our crude oil exports, reflecting production revisions made by other oil producing countries in order to contribute to crude oil prices stabilization. However, we have not changed our export goals because of announcements made by OPEC since 2004, and we believe that Mexico has no plans to change our current level of crude oil exports.

### **Results of Operations of Petróleos Mexicanos, the Subsidiary Entities and the Subsidiary Companies—For the Year Ended December 31, 2015 Compared to the Year Ended December 31, 2014**

#### *Total Sales*

Total sales decreased by 26.5%, or Ps. 420.3 billion, in 2015, from Ps. 1,586.7 billion in 2014 to Ps. 1,166.4 billion in 2015, primarily due to the decrease in average sales prices of Mexican crude oil, petroleum products and natural gas in the international markets. During 2015, the weighted average Mexican crude oil export price decreased by 50.3%, from U.S. \$86.00 per barrel in 2014 to U.S. \$42.70 per barrel in 2015. Crude oil export volumes increased by 2.3% in 2015 as compared to 2014. The impact of price decreases on both domestic and export sales is explained in further detail below.

#### *Domestic Sales*

Domestic sales decreased by 21.0% in 2015, from Ps. 945.0 billion in 2014 to Ps. 746.2 billion in 2015, primarily due to a decrease in the average prices of gasoline, diesel, fuel oil and jet fuel. Domestic sales of petroleum products decreased by 20.3% in 2015, from Ps. 830.5 billion in 2014 to Ps. 662.3 billion in 2015, primarily due to decreases in the average prices of gasoline, diesel, turbosine and fuel oil. Domestic sales of natural gas and liquefied natural gas decreased by 30.0% in 2015, from Ps. 77.8 billion in

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2014 to Ps. 54.5 billion in 2015, primarily as a result of lower prices for these products. Domestic petrochemical sales (including sales of certain by-products of the petrochemical production process) decreased by 19.4%, from Ps. 36.6 billion in 2014 to Ps. 29.5 billion in 2015, primarily as a result of lower prices for these products.

### *Export Sales*

Export sales decreased by 35.4% in peso terms in 2015 (with U.S. dollar-denominated export revenues translated to pesos at the exchange rate on the date of the corresponding export sale), from Ps. 630.3 billion in 2014 to Ps. 407.2 billion in 2015. This decrease was primarily due to a 50.3% decrease in the weighted average Mexican crude oil export price. The decrease in export sales was partially offset by a 2.3% increase in the volume of crude oil exports in 2015.

Excluding the trading activities of the PMI Group (in order to show only the amount of export sales related to the subsidiary entities), export sales by the subsidiary entities to the PMI Group and third parties decreased by 39.8% in peso terms, from Ps. 546.6 billion in 2014 to Ps. 329.0 billion in 2015. In U.S. dollar terms, excluding the trading activities of the PMI Group, total export sales (which are U.S. dollar-denominated) decreased by 49.4% in 2015, from U.S. \$41.2 billion in 2014 to U.S. \$20.9 billion in 2015. This was primarily due to the 50.5% decrease in the weighted average Mexican crude oil export price and a 2.3% increase in the volume of crude oil exports. The trading and export activities of the PMI Group generated additional marginal revenues of Ps. 78.2 billion in 2015, 6.8% higher in peso terms than the Ps. 83.9 billion of additional revenues generated in 2014, mainly due to higher international prices of gasoline traded by the PMI Group. The weighted average price per barrel of crude oil that the PMI Group sold to third parties in 2015 was U.S. \$43.29, or 49.6%, lower than the weighted average price of U.S. \$86.00 in 2014.

Crude oil export sales to PMI accounted for 87.6% of total export sales (excluding the trading activities of the PMI Group) in 2015, as compared to 87.0% in 2014. These crude oil sales decreased in peso terms by 39.3% in 2015, from Ps. 475.1 billion in 2014 to Ps. 288.2 billion in 2015, and decreased in U.S. dollar terms by 48.9% in 2015, from U.S. \$35.8 billion in 2014 to U.S. \$18.3 billion in 2015. The weighted average price per barrel of crude oil that Pemex Exploration and Production sold to PMI for export in 2015 was U.S. \$42.70, 50.3% lower than the weighted average price of U.S. \$86.0 in 2014.

Export sales of petroleum products, including natural gas and natural gas liquids, by our refining and gas and petrochemicals segments to the PMI Group and third parties decreased from 12.7% of total export sales (excluding the trading activities of the PMI Group) in 2014 to 12.1% of those export sales in 2015. Export sales of petroleum products, including products derived from natural gas and natural gas liquids, decreased by 42.6%, from Ps. 69.5 billion in 2014 to Ps. 39.9 billion in 2015, primarily due to a decrease in prices and in the volume of fuel oil sold. In U.S. dollar terms, export sales of petroleum products, including products derived from natural gas and natural gas liquids, decreased by 52.8%, from U.S. \$5.3 billion in 2014 to U.S. \$2.5 billion in 2015. Export sales of natural gas decreased by 50.0%, from Ps. 0.06 billion in 2014 to Ps. 0.03 billion in 2015. This was primarily due to a decrease in the price and volume of sales of natural gas sold as a result of lower demand in the international market.

Petrochemical products accounted for the remainder of export sales in 2014 and 2015. Export sales of petrochemical products (including certain by-products of the petrochemical process) decreased by 47.0% in 2015, from Ps. 1.7 billion in 2014 to Ps. 0.9 billion in 2015, primarily as a result of decreases in the prices and volumes of sales of styrene, sulfur and ethylene. In U.S. dollar terms, export sales of petrochemical products (including certain by-products of the petrochemical process) decreased by 57.5% in 2015, from U.S. \$131.2 million in 2014 to U.S. \$55.8 million in 2015.

### *Services Income*

Services income increased by 13.2% in 2015, from Ps. 11.4 billion in 2014 to Ps. 12.9 billion in 2015, primarily as a result of a Ps. 1.0 billion increase in services provided by Pemex Logistics to third parties, a Ps. 0.7 billion increase in revenues from freight and managerial services provided by Pemex Industrial Transformation and a Ps. 0.2 billion increase in insurance revenues from Kot Insurance Company, AG.

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*Cost of Sales, Impairment of Wells, Pipelines, Properties, Plant and Equipment, Cost of Employee Benefits and General Expenses*

Cost of sales increased by 6.2%, from Ps. 842.6 billion in 2014 to Ps. 895.1 billion in 2015. This increase was mainly due to: (1) the recognition of Ps. 53.9 billion in new hydrocarbon extraction and exploration duties and taxes in connection with the new fiscal regime that took effect on January 1, 2015; (2) a Ps. 20.4 billion increase in the amortization of wells; and (3) an increase of Ps. 11.1 billion in the cost of unsuccessful wells. This increase was partially offset by a Ps. 54.5 billion decrease in the purchases of imports, primarily gasoline and diesel.

Impairment of wells, pipelines, properties, plant and equipment increased by Ps. 455.3 billion, from Ps. 22.6 billion in 2014 to Ps. 477.9 billion in 2015, mainly due to the decrease in future cash flows as a result of lower hydrocarbon prices, adjustments in the discount rates and changes in the criteria for identifying the cash-generating units of the refineries. See Note 12(d) to our consolidated financial statements.

During 2015 we had a Ps. 103.9 billion decrease in net periodic cost of employee benefits recognized as a separate line item due to modifications to our pension regime, as described in "Item 6—Directors, Senior Management and Employees—Employees."

General expenses decreased by 1.5%, from Ps. 143.5 billion in 2014 to Ps. 141.4 billion in 2015. This decrease was primarily due to a Ps. 2.5 billion decrease in the net periodic cost of employee benefits recognized under general expenses due to modifications to our pension regime.

*Other Revenues/Expenses, Net*

Other revenues, net, decreased by 106.4% in 2015, from other revenues, net, of Ps. 37.6 billion in 2014 to other expenses, net, of Ps. 2.4 billion in 2015. This decrease was primarily due to a Ps. 40.0 billion decrease in the credit attributable to the negative IEPS tax rate in 2015 as compared to 2014. The credit attributable to the negative IEPS tax rate is generated when the prices at which we sell gasoline and diesel in the domestic market are lower than the international market prices for such products. We recognized revenues from IEPS tax credits of Ps. 2.5 billion in 2015, as compared to Ps. 43.1 billion in 2014.

*Financing Income*

Financing income increased by Ps. 12.0 billion in 2015, from Ps. 3.0 billion in 2014 to Ps. 15.0 billion in 2015, primarily due to the effect of changes to the discount rate used in the computation of the provision for the plugging of wells.

*Financing Cost*

Financing cost increased by 31.4% in 2015, from Ps. 51.6 billion in 2014 to Ps. 67.8 billion in 2015, primarily due to an increase in interest expense in 2015 following higher levels of indebtedness and the depreciation of the peso against the U.S. dollar in 2015 as compared to 2014.

*Derivative Financial Instruments Income (Cost)*

Derivative financial instruments income (cost), net, increased by Ps. 12.0 billion, from a net cost of Ps. 9.4 billion in 2014 to a net cost of Ps. 21.4 billion in 2015, primarily due to an increase in costs associated with certain derivative financial instruments as a result of the appreciation of the U.S. dollar relative to other foreign currencies that we hedge.

*Exchange Loss, Net*

A substantial portion of our indebtedness, 77.9% as of December 31, 2015, is denominated in foreign currencies. Our exchange loss increased by Ps. 77.8 billion, from an exchange loss of Ps. 77.0 billion in 2014 to an exchange loss of Ps. 154.8 billion in 2015, primarily as a result of the higher rate of depreciation of the peso against the U.S. dollar, which depreciated by 16.9% in 2015 as compared to 12.6% in 2014. However, due to the fact that over 93.7% of our revenues from exports and domestic sales are referenced to prices denominated in U.S. dollars, and only 68.2 % of our expenses, including financing costs, are linked to U.S. dollar prices, the depreciation of the peso relative to the U.S. dollar did have a significant effect on our ability to meet U.S. dollar-denominated financial obligations and improved our ability to meet peso-denominated financial obligations in 2015.

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The value of the peso in U.S. dollar terms depreciated by 16.9% in 2015, from Ps. 14.7180 = U.S. \$1.00 on December 31, 2014 to Ps. 17.2065 = U.S. \$1.00 on December 31, 2015, as compared to a 12.6% depreciation of the peso in U.S. dollar terms in 2014.

### *Taxes, Duties and Other*

Hydrocarbon extraction duties and other duties and taxes paid decreased by 55.6% in 2015, from Ps. 746.1 billion in 2014 to Ps. 331.5 billion in 2015, primarily due to the 50.3% decrease in the weighted average price of the Mexican crude oil basket, from U.S. \$86.00 per barrel in 2014 to U.S. \$42.70 per barrel in 2015. Income related duties and taxes represented 28.4% of total sales in 2015, as compared to 47.0% of total sales in 2014, partly because certain hydrocarbon extraction and exploration duties and taxes under the new tax regime are recognized under cost of sales, as described above. Prior to January 1, 2015, all of our duties and taxes were income-based taxes and were therefore recognized under the "taxes, duties and other" line item.

### *Net Income/Loss*

In 2015, we had a net loss of Ps. 712.6 billion (U.S. \$41.4 billion) from Ps. 1,166.4 billion in total sales revenues, as compared to a net loss of Ps. 265.5 billion (U.S. \$15.4 billion) from Ps. 1,586.7 billion in total sales revenues in 2014. This increase in net loss was primarily explained by: (1) a Ps. 455.3 billion increase in impairment of fixed assets, which was mainly due to the decrease in future cash flows as a result of lower hydrocarbon prices; (2) a Ps. 420.4 billion decrease in sales mainly due to a decrease in the Mexican crude oil export price and decrease in our crude oil production and domestic sales prices; (3) a Ps. 77.8 billion increase in foreign exchange loss; (4) a Ps. 39.9 billion decrease in other revenues, net; and (5) a Ps. 16.2 billion increase in financing costs, net. This increase was partially offset by a Ps. 414.6 billion decrease in taxes and duties and a Ps. 184.3 billion decrease in the net periodic cost of employee benefits following modifications to our pension regime.

### *Other Comprehensive Results*

In 2015, we had a net gain of Ps. 88.6 billion in other comprehensive results, as compared to a net loss of Ps. 265.3 billion in 2014, primarily due to a decrease in the reserve for employee benefits that resulted from the increase in the discount rate used in the actuarial computation method from 6.98% in 2014 to 7.41% in 2015.

## **Results of Operations of Petróleos Mexicanos, the Subsidiary Entities and the Subsidiary Companies—For the Year Ended December 31, 2014 Compared to the Year Ended December 31, 2013**

### *Sales*

Total sales decreased by 1.3% in 2014, from Ps. 1,608.2 billion in 2013 to Ps. 1,586.7 billion in 2014. This decrease resulted primarily from lower average sales prices of Mexican crude oil in the international markets and a decrease in the volume of crude oil exports. During 2014, the weighted average Mexican crude oil export price decreased by 12.7%, from U.S. \$98.46 per barrel in 2013 to U.S. \$86.00 per barrel in 2014.

### *Domestic Sales*

Domestic sales increased by 3.8% in 2014, from Ps. 910.2 billion in 2013 to Ps. 945.0 billion in 2014, primarily due to increases in the average prices of gasoline, diesel and LPG. Domestic sales of natural gas increased by 9.9% in 2014, from Ps. 70.8 billion in 2013 to Ps. 77.8 billion in 2014, primarily as a result of an increase in the price of natural gas and despite a 0.4% decrease in the volume of domestic sales of natural gas, from 3,464 million cubic feet per day in 2013 to 3,451 million cubic feet per day in 2014. Domestic sales of petroleum products increased by 3.1% in 2014, from Ps. 805.5 billion in 2013 to Ps. 830.5 billion in 2014, primarily due to higher gasoline, diesel and LPG prices. Domestic petrochemical sales (including sales of certain by-products of the petrochemical production process) increased by 8.0%, from Ps. 33.9 billion in 2013 to Ps. 36.6 billion in 2014, primarily due to an increase in the prices of most petrochemical products sold by us, despite a 63.9% decrease in the volume of petrochemical product sales.

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### *Export Sales*

Export sales decreased by 8.3% in peso terms in 2014 (with U.S. dollar-denominated export revenues translated to pesos at the exchange rate on the date of the corresponding export sale), from Ps. 687.7 billion in 2013 to Ps. 630.3 billion in 2014. This decrease was primarily due to the 12.7% decrease in the weighted average Mexican crude oil export price and a 4.7% decrease in the volume of crude oil exports in 2014.

Excluding the trading activities of the PMI Group (in order to show only the amount of export sales related to the subsidiary entities), export sales by the subsidiary entities to the PMI Group and third parties decreased by 11.8% in peso terms, from Ps. 619.8 billion in 2013 to Ps. 546.6 billion in 2014. In U.S. dollar terms, excluding the trading activities of the PMI Group, total export sales (which are U.S. dollar-denominated) decreased by 15.0% in 2014, from U.S. \$48.5 billion in 2013 to U.S. \$41.2 billion in 2014. This decrease was primarily due to the 12.7% decrease in the weighted average Mexican crude oil export price and a 4.7% decrease in the volume of crude oil exports. The trading and export activities of the PMI Group generated additional marginal revenues of Ps. 83.9 billion in 2014, 23.6% higher in peso terms than the Ps. 67.9 billion of additional revenues generated in 2013, mainly due to higher international prices of gasolines traded by the PMI Group. The weighted average price per barrel of crude oil that the PMI Group sold to third parties in 2014 was U.S. \$86.00, or 12.7%, lower than the weighted average price of U.S. \$98.46 in 2013.

Crude oil export sales by Pemex-Exploration and Production to PMI accounted for 87.0% of total export sales (excluding the trading activities of the PMI Group) in 2014, as compared to 88.5% in 2013. These crude oil sales decreased in peso terms by 13.4% in 2014, from Ps. 548.4 billion in 2013 to Ps. 475.1 billion in 2014, and decreased in U.S. dollar terms by 16.6% in 2014, from U.S. \$42.9 billion in 2013 to U.S. \$35.8 billion in 2014. The weighted average price per barrel of crude oil that Pemex-Exploration and Production sold to PMI for export in 2014 was U.S. \$86.00, 12.7% lower than the weighted average price of U.S. \$98.46 in 2013.

Export sales of petroleum products, including natural gas and natural gas liquids, by Pemex-Refining and Pemex-Gas and Basic Petrochemicals to the PMI Group and third parties increased from 11.2% of total export sales (excluding the trading activities of the PMI Group) in 2013 to 12.7% of those export sales in 2014. Export sales of petroleum products, including products derived from natural gas and natural gas liquids, increased by 0.6%, from Ps. 69.1 billion in 2013 to Ps. 69.5 billion in 2014, primarily due to an increase in the volume of fuel oil sold. In U.S. dollar terms, export sales of petroleum products, including products derived from natural gas and natural gas liquids, decreased by 1.9%, from U.S. \$5.4 billion in 2013 to U.S. \$5.3 billion in 2014. Export sales of natural gas increased by 50.0%, from Ps. 0.04 billion in 2013 to Ps. 0.06 billion in 2014. This increase was primarily due to an increase in the price and volume of natural gas sold as a result of higher demand in the international market.

Petrochemical products accounted for the remainder of export sales in 2013 and 2014. Export sales of petrochemical products (including certain by-products of the petrochemical process) decreased by 22.7% in 2014, from Ps. 2.2 billion in 2013 to Ps. 1.7 billion in 2014, primarily as a result of decreases in the prices and volumes of ammonia, sulfur and styrene. In U.S. dollar terms, export sales of petrochemical products (including certain by-products of the petrochemical process) decreased by 23.4% in 2014, from U.S. \$171.3 million in 2013 to U.S. \$131.2 million in 2014.

### *Services Income*

In 2013 and 2014, services income totaled Ps. 10.3 billion and Ps. 11.4 billion, respectively. Services income increased by Ps. 1.1 billion, or 10.7%, during 2014, primarily as a result of a Ps. 0.8 billion increase in revenues from managerial services provided by Pemex-Petrochemicals to third parties and a Ps. 0.7 billion increase in insurance revenues from Kot AG.

### *Cost of Sales, Impairment of Wells, Pipelines, Properties, Plant and Equipment, and General Expenses*

Cost of sales increased by 3.5%, from Ps. 814.0 billion in 2013 to Ps. 842.6 billion in 2014. This increase was primarily due to: (1) a Ps. 25.0 billion increase in costs associated with our share in the Deer Park refinery; (2) a Ps. 15.4 billion increase in purchases of imported gasoline, natural gas, natural gas liquids, turbosine and diesel and (3) a Ps. 9.0 billion increase in operating expenses. This increase was partially offset by: (1) a Ps. 7.8 billion decrease in the amortization of assets; (2) a Ps. 5.4 billion decrease in maintenance costs and (3) a Ps. 5.3 billion decrease in the net periodic cost of employee benefits in 2014, which was primarily due

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to the change in the applicable discount rate from 8.45% in 2013 to 6.98% in 2014 and the expected rate of return on plan assets for retirement benefits.

Impairment of wells, pipelines, properties, plant and equipment decreased by Ps. 3.0 billion from Ps. 25.6 billion in 2013 to Ps. 22.6 billion in 2014, mainly due to the fact that the value in use of the Integral Burgos, Poza Rica, Macuspana and Pemex Petrochemical projects was more unfavorable in 2013 as compared to 2014 due to the decline in gas prices in the international market as well as the condition of economic hydrocarbon reserves located at these projects.

General expenses increased by 9.4%, from Ps. 131.1 billion in 2013 to Ps. 143.5 billion in 2014. This increase was primarily due to a Ps. 11.7 billion increase in the net cost of employee benefits for the period and a Ps. 1.0 billion increase in operating expenses.

*Other Revenues (Principally IEPS Benefit), Net*

Other revenues, net, decreased by 58.3% in 2014, from Ps. 90.1 billion in 2013 to Ps. 37.6 billion in 2014. This decrease was primarily due to a decrease in the credit attributable to the negative IEPS tax rate in 2014 as compared to 2013, which is generated when the prices at which we sell gasoline and diesel in the domestic market are lower than the international market prices for such products. As a result, we recognized revenues from IEPS tax credits of Ps. 43.1 billion in 2014, as compared to Ps. 94.5 billion in 2013.

*Financing Income*

Financing income decreased by 65.5% in 2014, from Ps. 8.7 billion in 2013 to Ps. 3.0 billion in 2014, primarily due to a Ps. 5.7 billion decrease in interest income.

*Financing Cost*

Financing cost increased by 30.3% in 2014, from Ps. 39.6 billion in 2013 to Ps. 51.6 billion in 2014, primarily due to a Ps. 12.0 billion increase in interest expense resulting from a higher level of debt in 2014 as compared to 2013 and an increase in foreign exchange rates.

*Derivative Financial Instruments Income (Cost)*

DFI cost increased by Ps. 10.7 billion, from a gain of Ps. 1.3 billion in 2013 to a loss of Ps. 9.4 billion in 2014, primarily due to a Ps. 7.6 billion increase in costs associated with certain DFIs resulting from the appreciation of the U.S. dollar relative to other foreign currencies that we hedge.

*Foreign Exchange, Net*

A substantial portion of our indebtedness, 77.8% as of December 31, 2014, is denominated in U.S. dollars and other foreign currencies. The higher depreciation of the peso relative to the U.S. dollar during 2014 as compared to 2013 resulted in a Ps. 73.0 billion increase in our foreign exchange loss, from a loss of approximately Ps. 4.0 billion in 2013 to a loss of approximately Ps. 77.0 billion in 2014. However, due to the fact that over 95% of our revenues from exports and domestic sales are referenced to prices denominated in U.S. dollars, and only 73% of our expenses, including financing costs, are linked to U.S. dollar prices, the depreciation of the peso relative to the U.S. dollar did not affect our ability to meet U.S. dollar-denominated financial obligations and improved our ability to meet peso-denominated financial obligations in 2014. The value of the peso in U.S. dollar terms depreciated by 12.6% in 2014, from Ps. 13.0765 = U.S. \$1.00 on December 31, 2013 to Ps. 14.7180 = U.S. \$1.00 on December 31, 2014, as compared to a 0.5% depreciation of the peso in U.S. dollar terms in 2013. The higher depreciation of the peso relative to the U.S. dollar was partially offset by the appreciation of the peso relative to the euro in 2014 as compared to 2013.

*Taxes and Duties*

Taxes and duties (including the IEPS tax) decreased by 13.7% in 2014, from Ps. 864.9 billion in 2013 to Ps. 746.1 billion in 2014, primarily due to the 12.7% decrease in the weighted average Mexican crude oil export price, from U.S. \$98.46 per barrel to

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U.S. \$86.00 per barrel in 2014. In 2014, duties and taxes represented 47.0% of total sales, whereas in 2013 they represented 53.8% of total sales, because the decrease in our sales in 2014 directly impacted the amount of taxes and duties owed.

### *Net Income/Loss*

In 2014, we had a net loss of Ps. 265.5 billion from Ps. 1,586.7 billion in total sales revenues, as compared to a net loss of Ps. 170.1 billion from Ps. 1,608.2 billion in total sales revenues in 2013. This increase in net loss in 2014 is primarily explained by: (1) a Ps. 77.0 billion foreign exchange loss, which was partially offset by the appreciation of the peso relative to the euro in 2014 as compared to 2013; (2) a Ps. 52.5 billion decrease in other revenues, net; (3) a Ps. 19.6 billion increase in financing cost, net; (4) a Ps. 25.7 billion increase in cost of sales, which was partially offset by the Ps. 118.8 billion decrease in taxes and duties and (5) a Ps. 21.5 billion decrease in sales.

### *Other Comprehensive Results*

In 2014, we had a net loss of Ps. 265.3 billion in other comprehensive results, as compared to a net income of Ps. 254.3 billion in 2013, primarily due to an increase in the reserve for employee benefits that resulted from a decrease, from 8.45% in 2013 to 6.98% in 2014, in the discount rate applied as part of the actuarial computation method.

## **Liquidity and Capital Resources**

### *Overview*

The sharp decline in crude oil prices beginning at the end of 2014 negatively impacted our liquidity. Our principal use of funds in 2015 was capital expenditures, including exploration expenditures (amounting to Ps. 259.2 billion), which we met primarily with cash provided by net cash flows from financing activities. During 2015, our net cash flow from operating activities was less than the resources needed to fund our capital expenditures and other expenses. Our net funds from operating activities totaled Ps. 102.3 billion in 2015, as compared to net funds from operating activities of Ps. 134.5 billion in 2014. Total sales decreased by 26.5% in 2015, from Ps. 1,586.7 billion in 2014 to Ps. 1,166.4 billion in 2015. Because of the decrease in net funds from operating activities, we were forced in 2015 to rely more heavily on our financing activities. Our net cash flows from financing activities totaled Ps. 134.9 billion in 2015, as compared to net cash flows of Ps. 117.1 billion used in financing activities in 2014.

For 2016, we are forecasting capital expenditures of approximately Ps. 156.7 billion, a decrease as from 2015, which is primarily due to the expected price levels of our products in 2016 and our expected borrowing capacity. Additionally, one of the most critical problems we face in 2016 is our accounts payable to suppliers. As of December 31, 2015, we owed our suppliers approximately Ps. 167.3 billion. However, we believe net cash flows from our operating and financing activities will be sufficient to meet our working capital, debt service and capital expenditure requirements in 2016 because we and the Mexican Government have adjusted investment, taxation and financing plans to address declining oil prices and maintain our financial strength and flexibility in the following manner:

- *Changes to Our Business Plan.* We have implemented certain measures intended to improve our financial situation, including the reduction of our budget in February 2015 and in February 2016, the implementation of a plan to reduce costs and the establishment of lines of credit with Mexican development banks.
- *No Payment of Dividend.* The Mexican Government has announced that Petróleos Mexicanos will not be required to pay a state dividend in 2016. See “Item 4—Taxes and Duties and other Payments to the Mexican Government—Fiscal Regime for PEMEX—Other Payments to the Mexican Government” above for more information.



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- *Modifying Our Funding Strategy.* We intend to enhance our financial flexibility by increasing committed liquidity sources and diversifying our sources of funding. Specifically, we are considering the following:
- *Joint Ventures:* We have already identified ten opportunities for joint ventures with other companies and hope that these strategic partnerships will reduce our capital commitments, as well as increase production levels, accelerate field development and enable us to gain access to new technologies and current best practices in the industry.
- *Monetization of Non-Strategic Assets:* We are considering opportunities to monetize our transportation and storage infrastructure while maintaining operational control. As part of this process we are exploring opportunities to create one or several issuing trusts commonly known as “FIBRA E’s,” which are new publicly-traded vehicles similar to the master limited partnerships traded in the United States, that hold assets primarily related to the transportation and storage of hydrocarbons. These vehicles are expected to permit us to raise capital at a lower cost, as compared to more traditional sources of financing. We are also considering the divestment of non-strategic assets.

Moreover, on April 13, 2016, the Ministry of Finance and Public Credit announced additional support mechanisms to provide us with a total cash flow injection of Ps. 73.5 billion composed of (1) a capital contribution of Ps. 26.5 billion, which was received on April 21, 2016 and (2) Ps. 47.0 billion of short-term Mexican government debt securities, which we will receive later this year in exchange for the Ps. 50.0 billion promissory note issued to us by the Mexican Government last year. As a condition to receiving this additional support, we must reduce our liabilities with suppliers and contractors by the same amount—Ps. 73.5 billion in 2016.

Furthermore, the Mexican Government announced that it modified the fiscal regime applicable to us to enable us to deduct more of our exploration and production costs. Under the current low oil price environment, we estimate (based on a price of crude oil at U.S.\$25.00 per barrel) that this will reduce the amount of taxes we will have to pay for the year ended December 31, 2016 by approximately Ps. 50.0 billion. If prices of crude oil increase, we would be able to take greater deductions.

As noted above, successful completion of financings is an integral part of our plan to satisfy our working capital, capital expenditure, debt maturities and other requirements for the foreseeable future. Our financing program for 2016, included in the *Ley de Ingresos de la Federación para el Ejercicio Fiscal 2016* (Federal Revenues Law for the Fiscal Year 2016), provides for the incurrence of up to U.S. \$15.7 billion in net indebtedness (i.e., U.S. \$21.0 billion of new financings minus U.S. \$5.3 billion of debt payments) through a combination of domestic and international capital markets offerings and borrowings from domestic and international financial institutions.

We have a substantial amount of debt, which we have incurred primarily to finance the capital expenditures needed to carry out our capital investment projects. Due to our heavy tax burden, our cash flow from operations in recent years has not been sufficient to fund our capital expenditures and other expenses and, accordingly, our debt has significantly increased. The sharp decline in oil prices that began in late 2014 has had a negative impact on our ability to generate positive cash flows, which, together with our continued heavy tax burden, has further exacerbated our ability to fund our capital expenditures and other expenses from cash flow from operations. Therefore, in order to develop our hydrocarbon reserves and amortize scheduled debt maturities, we will need to raise significant amounts of financing from a broad range of funding sources.

As of December 31, 2015, our total indebtedness, including accrued interest, was approximately U.S. \$86.8 billion (Ps 1,493.4 billion), in nominal terms, which represents a 11.7% increase (a 30.6% increase in peso terms) compared to our total indebtedness, including accrued interest, of approximately U.S. \$77.7 billion (Ps. 1,143.3 billion) as of December 31, 2014. 26.7% of our existing debt as of December 31, 2015, or U.S. \$23.1 billion, is scheduled to mature in the next three years. Our level of debt may increase further in the short or medium term and may have an adverse effect on our financial condition, results of operations and liquidity position. To service our debt, we have relied and may continue to rely on a combination of cash flow from operations, drawdowns under our available credit facilities and the incurrence of additional indebtedness (including refinancings of existing indebtedness). In addition, we are taking actions to improve our financial position, such as those discussed above.

Certain rating agencies have expressed concerns regarding: (1) the total amount of our debt; (2) the significant increase in our indebtedness over the last several years; (3) our negative free cash flow during 2015, primarily resulting from our significant capital investment projects and the declining price of oil; (4) our substantial unfunded reserve for retirement pensions and seniority premiums, which was equal to Ps. 1,279.4 billion (U.S. \$74.4 billion) as of December 31, 2015 and (5) the resilience of our operating expenses notwithstanding the sharp decline in oil prices that began in late 2014. On January 29, 2016, Standard & Poor’s announced the downgrade of our stand-alone credit profile from BB+ to BB. On March 31, 2016, Moody’s Investors Service announced the revision of our global foreign currency and local currency credit ratings from Baa1 to Baa3 and changed the outlook for its credit ratings to negative.

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Any further lowering of our credit ratings may have adverse consequences on our ability to access the financial markets and/or our cost of financing. If we were unable to obtain financing on favorable terms or at all, this could hamper our ability to obtain further financing on favorable terms as well as investment in projects financed through debt and impair our ability to meet our principal and interest payment obligations with our creditors. As a result, we may be exposed to liquidity constraints and may not be able to service our debt or make the capital expenditures needed to maintain our current production levels and to maintain, and increase, our proved hydrocarbon reserves, which may adversely affect our financial condition and results of operations.

If such constraints occur at a time when our cash flow from operations is less than the resources needed to fund our capital expenditures or to meet our debt service obligations, in order to provide additional liquidity to our operations, we could be forced to further reduce our planned capital expenditures, implement further austerity measures and/or sell additional non-strategic assets in order to raise funds. A reduction in our capital expenditure program could adversely affect our financial condition and results of operations. Such measures may not be sufficient to permit us to meet our obligations.

*Going Concern*

Our consolidated financial statements have been prepared under the assumption that we will continue as a going concern. As we describe in Note 2 to our audited consolidated financial statements, we have experienced recurring losses from our operations and have negative working capital and negative equity, which raises substantial doubt regarding our ability to continue as a going concern, as stated by our independent auditors in their most recent report. We discuss the circumstances that have caused these negative trends, as well our plans in regard to these matters in “Item 5—Operating and Financial Review and Prospects—Overview” and Note 2 to our consolidated financial statements included herein. We continue operating as a going concern, and our consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

*Equity Structure and Mexican Government Contributions*

Our total equity as of December 31, 2015 was negative Ps. 1,331.7 billion, and our total capitalization (long-term debt plus equity) totaled negative Ps. 30.8 billion. During 2015, our total equity decreased by Ps. 564.0 billion from negative Ps. 767.7 billion as of December 31, 2014, primarily due to our Ps. 623.9 billion total comprehensive loss for the year resulting from our Ps. 712.4 billion net loss, our net gain of Ps. 88.6 billion in other comprehensive results and the Ps. 60.0 billion net increase in Mexican Government contributions to Petróleos Mexicanos. Under the *Ley de Concursos Mercantiles* (Commercial Bankruptcy Law of Mexico), Petróleos Mexicanos and the subsidiary entities cannot be subject to a bankruptcy proceeding. In addition, our current financing agreements do not include financial covenants or events of default that would be triggered as a result of our having negative equity.

On December 23, 2014, Petróleos Mexicanos made a Ps. 70.0 billion payment to the Mexican Government. This payment was made pursuant to a request by the SHCP in accordance with Article 6 of the 2014 Revenue Law for 2014), Article 26 of the Federal Law of Budget and Fiscal Accountability and the fourteenth transitional article of the Petróleos Mexicanos Law. This withdrawal was partially offset by the Ps. 20.0 billion equity contribution made by the Mexican Government to Petróleos Mexicanos in the form of Certificates of Contribution “A” on December 26, 2014. The net effect of this withdrawal and contribution was a Ps. 50.0 billion decrease in our equity.

On January 27, 2014, the Mexican Government contributed Ps. 2.0 billion to the Oil Revenues Stabilization Fund. This contribution was recognized as a Ps. 2.0 billion increase in Mexican Government contributions to Petróleos Mexicanos.

On January 19, 2015, the Mexican Government made an equity contribution of Ps. 10.0 billion to Petróleos Mexicanos in accordance with the Federal Law of Budget and Fiscal Accountability, as amended. This payment was recognized as a Ps. 10.0 billion increase in Mexican Government contributions to Petróleos Mexicanos.

On December 24, 2015, the Mexican Government issued, through the Ministry of Finance and Public Credit, a Ps. 50.0 billion promissory note due December 31, 2050 payable to Petróleos Mexicanos. The promissory note, which accrues interest at a rate of 6.93% per year, is expected to be exchanged for different credit instruments once the independent expert concludes its review of the decrease in our benefits liabilities as disclosed in Note 21 to our consolidated financial statements included herein. We recognized this promissory note as a long-term account receivable and a Mexican Government equity contribution to Petróleos Mexicanos.

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As of December 31, 2014 and 2015, the balance of Mexican Government contributions to Petróleos Mexicanos was Ps. 43.7 billion. As of December 31, 2014 and 2015, the total amount of contributions in the form of Certificates of Contribution "A" was Ps. 134.6 billion and Ps. 194.6 billion, respectively.

### *Cash Flows from Operating, Financing and Investing Activities*

During 2015, net funds provided by operating activities totaled Ps. 102.3 billion, as compared to Ps. 134.4 billion in 2014. Net loss was Ps. 712.6 billion in 2015, as compared to net loss of Ps. 265.5 billion in 2014. Our net cash flows from financing activities totaled Ps. 134.9 billion in 2015, as compared to Ps. 117.1 billion in 2014. During 2015, we applied net cash flows of Ps. 254.8 billion for net investments at cost in fixed assets, including exploration expenses, as compared to our application of cash flows of Ps. 222.7 billion in 2014 for net investments at cost in fixed assets, including exploration expenses.

At December 31, 2015, our cash and cash equivalents totaled Ps. 109.4 billion, as compared to Ps. 118.0 billion at December 31, 2014.

### *Liquidity Position*

We define liquidity as funds available under our lines of credit as well as cash and cash equivalents. The following table summarizes our liquidity position as of December 31, 2014 and 2015.

	<b>As of December 31,</b>	
	<b>2015</b>	<b>2014</b>
	<b>(millions of pesos)</b>	
Borrowing base under lines of credit	Ps. 11,337	Ps. —
Cash and cash equivalents	109,369	117,989
Liquidity	<u>Ps. 120,706</u>	<u>Ps. 117,989</u>

The following table summarizes our sources and uses of cash for the years ended December 31, 2014 and 2015:

	<b>For the years ended December 31,</b>	
	<b>2015</b>	<b>2014</b>
	<b>(millions of pesos)</b>	
Net cash flows (used in) from operating activities	Ps. 102,337	Ps. 134,356
Net cash flows used in investing activities	(254,832)	(222,668)
Net cash flows from financing activities	134,915	117,112
Effect of change in cash value	8,960	8,442
Net (decrease) increase in cash and cash equivalents	<u>Ps. (8,620)</u>	<u>Ps. 37,242</u>

Note: Numbers may not total due to rounding.

### *Investment Policies*

Our Finance and Treasury Department maintains financial resources sufficient to meet our payment commitments and those of the subsidiary entities, as well as a comprehensive, consolidated cash position and related projections in anticipation of such commitments.

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Our investment policies attempt to take advantage of favorable market conditions by accessing the most favorable terms offered to us by financial institutions. Investments of financial resources by our Finance and Treasury Department are made in accordance with the following policies:

### *Investments of Mexican Pesos*

In connection with investments in Mexican pesos, we are obligated, during the structuring and development phase of our financial transactions, to observe and comply with the investment guidelines for resources in pesos that were approved by our Financial Resources Committee on December 21, 2006, as modified from time to time. We may only invest in the following:

- (a) securities issued or guaranteed by the Mexican Government;
- (b) repurchase agreements that use securities issued or guaranteed by the Mexican Government;
- (c) time deposits with major financial institutions, the balance of which may not exceed 10% of our cash and cash equivalents; and
- (d) shares of mutual funds whose investments are limited to securities issued or guaranteed by the Mexican Government.

In addition to the above limits, repurchase agreements (which are sometimes called repo transactions) may only be entered into with financial institutions that maintain, at a minimum, the following credit ratings as issued by the applicable rating agency:

<u>Domestic scale</u>	<u>Fitch Ratings</u>	<u>S&amp;P</u>	<u>Moody's</u>
Long term	A- (mex)	BB	Baa3/MX-1

### *Investments of Financial Resources in Dollars*

Investments of financial resources in dollars must meet our operational and strategic requirements and must be previously approved by *Banco de México* on a case-by-case basis. Currently, our investments in dollars are limited to operational accounts, short-term money market funds and time deposits. Our dollar investments are managed by *Banco de México*.

### *Operational Currencies*

The main currencies for investing cash and cash equivalents are pesos and dollars. Similarly, we generate revenues from the domestic and international sales of our products in those two currencies and our expenses, including those relating to our debt service, are payable in these two currencies.

### *Commitments for Capital Expenditures and Sources of Funding*

Our current aggregate commitments for capital expenditures for 2016 total approximately Ps. 156.7 billion. For a general description of our current commitments for capital expenditures, see "Item 4—Information on the Company—History and Development—Capital Expenditures and Investments." The amount of our aggregate capital expenditures commitments for 2016 remains subject to adjustment by the Mexican Government. See "Item 3—Key Information—Risk Factors—Risk Factors Related to our Relationship with the Mexican Government—The Mexican Government controls us and it could limit our ability to satisfy our external debt obligations or could reorganize or transfer us or our assets."

The following table sets forth our total capital expenditures by segment for the year ended December 31, 2015, and the budget for these expenditures for 2016. For more information see "Item 4—History and Development—Capital Expenditures and Investments—Capital Expenditures Budget."

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	<u>Year ended December 31,</u> <u>2015</u>	<u>Budget</u> <u>2016<sup>(1)</sup></u>
	(millions of pesos)	
Exploration and Production <sup>(2)</sup>	Ps. 151,546	Ps. 121,576
Refining <sup>(3)</sup>	29,646	18,919
Gas and Basic Petrochemicals <sup>(4)</sup>	5,160	2,093
Petrochemicals <sup>(5)</sup>	494	357
Drilling and Services <sup>(6)</sup>	1,564	1,663
Logistics <sup>(7)</sup>	9,827	4,449
Fertilizers <sup>(8)</sup>	1,044	444
Ethylene <sup>(9)</sup>	1,869	1,786
Corporate and other Subsidiaries	2,157	5,422
Total	<u>Ps. 203,307</u>	<u>Ps. 156,709</u>

Note: Numbers may not total due to rounding.

- (1) Amended budget, as approved by the Board of Directors of Petróleos Mexicanos on February 26, 2016.
- (2) Figures for the exploration and production segment for the year ended December 31, 2015 include capital expenditures related to the drilling and services segment until the formation of Pemex Drilling and Services on August 1, 2015 and to the logistics segment until the formation of Pemex Logistics on October 1, 2015.
- (3) Figures for the refining segment for the year ended December 31, 2015 are allocated to the budget for the subsidiary Pemex Industrial Transformation.
- (4) Figures for the gas and petrochemicals segment for the year ended December 31, 2015 are allocated to the budget for the subsidiary Pemex Industrial Transformation.
- (5) Figures for the petrochemicals segment for the year ended December 31, 2015 include capital expenditures related to the ethylene segment until the formation of Pemex Ethylene on October 1, 2015 and to the fertilizers segment until the formation of Pemex Fertilizers on October 1, 2015. Figures for the petrochemicals segment for the year ended December 31, 2015 are allocated to the budget for the subsidiary Pemex Industrial Transformation.
- (6) Figures for the drilling and services segment for the year ended December 31, 2015 refer to capital expenditures since August 1, 2015, when Pemex Drilling and Services was formed.
- (7) Figures for the logistics segment for the year ended December 31, 2015 refer to capital expenditures since October 1, 2015, when Pemex Logistics was formed.
- (8) Figures for the fertilizers segment for the year ended December 31, 2015 refer to capital expenditures since October 1, 2015, when Pemex Fertilizers was formed.
- (9) Figures for the ethylene segment for the year ended December 31, 2015 refer to capital expenditures since October 1, 2015, when Pemex Ethylene was formed.

Our current commitments for capital expenditures have fluctuated in recent years as compared to previous years. Based on past experience, we expect to generate sufficient funds for our working capital, capital expenditures and investments through:

- cash flow generated by operations;
- the issuance of *certificados bursátiles* (peso-denominated publicly traded notes) in the Mexican market;
- the issuance of debt securities in the international capital markets;
- the renewal of existing lines of credit and the entering into of new lines of credit from international and local commercial banks; and
- other financing activities.

The securities that we issue may vary in tenor, amount, currency and type of interest rate. We may issue debt securities in U.S. dollars, Japanese yen, euros, pounds, pesos or Swiss francs, among others; these securities may be issued with fixed or floating rates and with maturities of one or more years, including perpetual debt securities, depending on market conditions and funding requirements. We may issue securities in the international capital markets or in the Mexican domestic market, or in both markets. Commercial bank syndicated loans may be established with single or multiple tranches with varying maturities. Bilateral loans may vary in tenor and range, which may be of one year or more. See also “—Financing Activities” below.

In order to be able to carry out our planned capital expenditures program, we will need to seek financing from a variety of sources, and we cannot guarantee that we will be able to obtain financing on terms that would be acceptable to us. Our inability to obtain additional financing could have an adverse effect on our planned capital expenditures program and result in our being required to limit or defer this program.

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*Financing Activities*

*2016 Financing Activities.* During the period from January 1 to April 30, 2016, we participated in the following activities:

- On January 25, 2016, Petróleos Mexicanos increased its Medium-Term Notes Program from U.S. \$52,000,000,000 to U.S. \$62,000,000,000 pursuant to an authorization by the Board of Directors of Petróleos Mexicanos on August 18, 2015.
- On January 27, 2016, Petróleos Mexicanos obtained a loan from a line of credit for U.S. \$130,000,000.
- On January 28, 2016, subsidiaries of Pemex Fertilizers obtained loans for an aggregate amount of U.S. \$635,000,000 in connection with the acquisition of Grupo Fertinal, S.A.
- On February 4, 2016, Petróleos Mexicanos issued U.S. \$5,000,000,000 of debt securities under its Medium-Term Notes Program, Series C, in three tranches: (1) U.S. \$750,000,000 of its 5.500% Notes due 2019; (2) U.S. \$1,250,000,000 of its 6.375% Notes due 2021; and (3) U.S. \$3,000,000,000 of its 6.875 % Notes due 2026. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- On February 5, 2016, Petróleos Mexicanos obtained a loan from a line of credit for Ps. 7,000,000,000 bearing interest at a floating rate linked to the Tasa de Interés Interbancaria de Equilibrio (Interbank Equilibrium Interest Rate) plus 0.55%, which matures on January 27, 2017.
- On March 15, 2016, Petróleos Mexicanos issued €2,250,000,000 of debt securities U.S. \$62,000,000,000 Medium-Term Notes Program, Series C in two tranches: (1) €1,350,000,000 of its 3.750% Notes due 2019 and (2) €900,000,000 of its 5.125% Notes due 2023. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- On March 17, 2016, Petróleos Mexicanos received a disbursement of Ps. 2,000,000,000 from its revolving credit lines at a floating rate linked to the *Tasa de Interés Interbancaria de Equilibrio* (Interbank Equilibrium Interest Rate, or TIIE), which matures on March 17, 2017.
- On March 17, 2016, Petróleos Mexicanos received a disbursement of Ps. 3,300,000,000 from its revolving credit lines at a floating rate linked to the TIIE, which matures on March 17, 2017.
- On March 23, 2016, Petróleos Mexicanos issued in the Mexican market Ps. 5,000,000,000 of *Certificados Bursátiles* under its Ps. 200,000,000,000 *Unidades de Inversión* (or UDI) equivalent *Certificados Bursátiles* Program, at a floating rate linked to the TIIE due 2019. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- On March 28, 2016, Petróleos Mexicanos borrowed Ps. 9,700,000,000 from a credit line at a floating rate linked to TIIE, which matures on March 28, 2017.
- On April 19, 2016, Petróleos Mexicanos borrowed €500,000,000 from a credit line at fixed rate of 5.11%, which matures on March 15, 2023.
- During the period from January 1 to April 29, 2016, P.M.I. Holdings B.V. obtained U.S. \$2,754,000,000 in financing from its revolving credit lines and repaid U.S. \$2,695,000,000. The outstanding amount under these revolving credit lines as of April 29, 2016 was U.S. \$59,000,000.

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*2015 Financing Activities.* During 2015 we participated in the following activities:

- On January 16, 2015, Petróleos Mexicanos obtained a direct loan for Ps. 7,000,000,000 bearing interest at a floating rate linked to the THIE, which matured on January 16, 2016.
- On January 22, 2015, Petróleos Mexicanos increased its Medium-Term Notes Program from U.S. \$42,000,000,000 to U.S. \$52,000,000,000 pursuant to an authorization by the Board of Directors of Petróleos Mexicanos on December 19, 2014.
- On January 23, 2015, Petróleos Mexicanos issued U.S. \$6,000,000,000 of its debt securities under its U.S. \$52,000,000,000 Medium-Term Notes Program, Series C in three tranches: (1) U.S. \$1,500,000,000 of its 3.500% Notes due 2020; (2) U.S. \$1,500,000,000 of its 4.500% Notes due 2026; and (3) U.S. \$3,000,000,000 of its 5.625% Bonds due 2046. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On January 30, 2015, Petróleos Mexicanos amended the terms of its revolving credit facility in order to increase the amount available thereunder from U.S. \$1,250,000,000 to U.S. \$3,250,000,000 and to extend the maturity date to February 5, 2020. On February 5, 2015, Petróleos Mexicanos borrowed U.S. \$1,950,000,000 under this facility to prepay in full its U.S. \$700,000,000 credit facility dated as of December 17, 2014.
- On February 11, 2015, Petróleos Mexicanos issued Ps. 24,287,901,544 aggregate principal amount of *Certificados Bursátiles* in three tranches. The first tranche was issued at a fixed rate of 7.47% due 2026 in an aggregate principal amount of Ps. 17,000,000,000, consisting of (1) an international offering outside of Mexico of Ps. 9,000,000,000 of “Euroclearable *Certificados Bursátiles*,” which are eligible for clearance through Euroclear Clearance System plc and Indeval, and (2) a concurrent offering to the public in Mexico of Ps. 8,000,000,000. This issuance was a reopening of the same series of *Certificados Bursátiles* due 2026 that was originally issued on November 27, 2014. The second tranche was issued at a floating rate due 2020 in an aggregate principal amount of Ps. 4,300,000,000. This issuance was a reopening of the same series of *Certificados Bursátiles* due 2020 that was originally issued on November 27, 2014. The third tranche was issued at a fixed rate of 3.94% due 2026 in an aggregate principal amount of 565,886,800 UDI, equivalent to Ps. 2,987,901,544. This issuance represented the fourth reopening of the same series originally issued on January 30, 2014 and subsequently reopened on July 2, 2014, September 11, 2014 and November 27, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos’ Ps. 200,000,000,000 or UDI equivalent *Certificados Bursátiles* Program. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On February 11, 2015, Petróleos Mexicanos entered into a term loan credit facility in the amount of U.S. \$2,000,000,000. On February 17, 2015, Petróleos Mexicanos borrowed U.S. \$2,000,000,000 under this facility to prepay in full its credit agreement dated as of November 18, 2010.
- On March 24, 2015, the CNBV authorized Petróleos Mexicanos’ Short-Term *Certificados Bursátiles* Program for an aggregate revolving amount of Ps. 100,000,000,000. As of the date of this annual report, there are no outstanding amounts under this program. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On April 21, 2015, Petróleos Mexicanos issued €2,250,000,000 of its debt securities under its U.S. \$52,000,000,000 Medium-Term Notes Program, Series C in two tranches: (1) €1,000,000,000 of its 1.875% Notes due 2022 and (2) €1,250,000,000 of its 2.750% Notes due 2027. All debt securities issued under this program are guaranteed by

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- Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On June 26, 2015, Petróleos Mexicanos received a disbursement of U.S. \$500,000,000 from its revolving credit lines entered into with international financial institutions.
  - On July 7, 2015, Petróleos Mexicanos obtained a loan for Ps. 18,000,000,000 bearing interest at a floating rate linked to the *Tasa de Interés Interbancaria de Equilibrio* (Interbank Equilibrium Interest Rate, or TIIE, for its Spanish acronym) plus 0.95%, which matures on July 7, 2025.
  - On July 16, 2015, Petróleos Mexicanos issued in the Mexican market Ps. 7,721,582,153 aggregate principal amount of *Certificados Bursátiles* under its Ps. 200,000,000,000 or UDI equivalent *Certificados Bursátiles* Program, in three tranches: (1) aggregate principal amount of Ps. 650,000,000 at a floating rate linked to the TIIE plus 0.15% due 2020, this issuance was the second reopening of the same series of *Certificados Bursátiles* originally issued on November 27, 2014 and reopened on February 11, 2015; (2) aggregate principal amount of Ps. 6,100,000,000 at a fixed rate of 7.47% due 2026, this issuance was the second reopening of the same series of *Certificados Bursátiles* originally issued on November 27, 2014 and reopened on February 11, 2015; and (3) aggregate principal amount of 183,941,400 UDIs, equivalent to approximately Ps. 971,582,153, at a fixed rate of 3.94% due 2026, this issuance was the fifth reopening of the same series of *Certificados Bursátiles* originally issued on January 30, 2014 and reopened on July 2, 2014, September 11, 2014, November 27, 2014 and February 11, 2015. As of the date of this report, all debt securities issued under the aforementioned program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
  - On July 31, 2015, Petróleos Mexicanos issued U.S. \$525,000,000 of notes due 2025, which bear interest at a fixed rate of 2.46%. The notes are guaranteed by the Export-Import Bank of the United States.
  - On August 4, 2015, P.M.I. Holdings, B.V. obtained a loan for U.S. \$250,000,000, which bears interest at a rate of 1.79% and is due in 2018. The loan is collateralized by 20,724,331 Repsol shares.
  - On August 28, 2015, Petróleos Mexicanos borrowed U.S. \$120,000,000 from a U.S. \$3,250,000,000 revolving credit line, which bears interest at a floating rate linked to the London Interbank Offered Rate (LIBOR) and is due in February 2016.
  - On September 15, 2015, Petróleos Mexicanos borrowed U.S. \$800,000,000 from its revolving credit lines entered into with international financial institutions.
  - On September 30, 2015, Petróleos Mexicanos entered into a credit facility in the amount of Ps. 5,000,000,000, which bears interest at a floating rate linked to the TIIE and matures in September 2023. This credit facility was fully disbursed on October 7, 2015.
  - On September 30, 2015, Petróleos Mexicanos borrowed U.S. \$500,000,000 from its revolving credit line, which bears interest at a rate linked to LIBOR and matures in December 2025. The credit facility is guaranteed by the Export-Import Bank of the United States.
  - On September 30, 2015, Petróleos Mexicanos borrowed U.S. \$475,000,000 from a revolving credit facility guaranteed by the Export-Import Bank of the United States, which bears interest at a rate linked to LIBOR and matures in December 2025.
  - On September 30, 2015, Petróleos Mexicanos issued in the Mexican market Ps. 7,400,493,076 aggregate principal amount of *Certificados Bursátiles* under its Ps. 200,000,000,000 or UDI equivalent *Certificados Bursátiles* Program,



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in two tranches: (1) aggregate principal amount of Ps. 1,357,736,800 at a floating rate linked to the TIIE plus 0.35 basis points due 2018; and (2) aggregate principal amount of 1,138,056,400 UDIs, equivalent to approximately Ps. 6,042,756,276, at a fixed rate of 5.23% due 2035. As of the date of this report, all debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.

- On October 7, 2015, Petróleos Mexicanos obtained a loan from a line of credit for Ps. 5,000,000,000 bearing interest at a floating rate linked to the TIIE, which matures on September 30, 2023.
- On October 22, 2015, Petróleos Mexicanos obtained a loan from a line of credit for Ps. 5,000,000,000 bearing interest at a floating rate linked to the TIIE, which matures on October 16, 2022.
- On November 6, 2015, Petróleos Mexicanos issued €100,000,000 of notes due 2030, which bear interest at a fixed rate of 4.625%. The notes are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- On December 8, 2015, Petróleos Mexicanos issued CHF 600,000,000 of its 1.5% Notes due 2020 under its U.S. \$52,000,000,000 Medium-Term Notes Program, Series C. The notes are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- On December 15, 2015, Petróleos Mexicanos received a disbursement for Ps. 10,000,000,000 from a revolving credit line bearing interest at a floating rate linked to the TIIE, which matures on March 15, 2016.
- On December 29, 2015, Petróleos Mexicanos received a disbursement for Ps. 4,400,000,000 bearing interest at a floating rate linked to the TIIE, which matures on March 29, 2016.
- From January 1, 2015 to December 31, 2015, Petróleos Mexicanos issued and repaid a total of Ps. 40,000,000,000 of short-term *Certificados Bursátiles* at fixed and floating rates under its Short-Term *Certificados Bursátiles* Program. As of December 31, 2015, there were no short-term *Certificados Bursátiles* issued under this program outstanding.
- From January 1, 2015 to December 31, 2015, P.M.I. Holdings B.V. obtained U.S. \$1,540,000,000 in financing from its revolving credit lines and repaid U.S. \$2,040,000,000. As of December 31, 2015, there was no outstanding amount under this revolving credit line.

*2014 Financing Activities.* During 2014 we participated in the following activities:

- On January 23, 2014, Petróleos Mexicanos issued U.S. \$4,000,000,000 of its debt securities under its U.S. \$32,000,000,000 Medium-Term Notes Program, Series C in three tranches: (1) U.S. \$500,000,000 of its 3.125% Notes due 2019; (2) U.S. \$500,000,000 of its 4.875% Notes due 2024, which was a reopening of its 4.875% Notes due 2024 originally issued on July 18, 2013; and (3) U.S. \$3,000,000,000 of its 6.375% Bonds due 2045. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On January 23, 2014, the Ministry of Finance and Public Credit authorized the increase of the Petróleos Mexicanos' Medium-Term Notes Program Series C from U.S. \$32,000,000,000 to U.S. \$42,000,000,000.

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- On January 30, 2014, Petróleos Mexicanos issued Ps. 7,500,000,000 aggregate principal amount of *Certificados Bursátiles* due 2024 at a fixed rate of 7.19%, consisting of (1) an international offering outside of Mexico of Ps. 2,616,050,000 of *Certificados Bursátiles* in the form of global depositary notes (or GDNs) and (2) a concurrent offering to the public in Mexico of Ps. 4,883,950,000 of *Certificados Bursátiles* not represented by GDNs. The issuance represented the second reopening of the same series of *Certificados Bursátiles* due 2024 originally issued on September 26, 2013 and reopened on December 11, 2013. Concurrently, Petróleos Mexicanos issued, in the Mexican market, Ps. 5,000,000,000 aggregate principal amount of *Certificados Bursátiles* in two tranches: one at a floating rate linked to the TIIE plus 3.8% for Ps. 2,000,000,000 due 2019, which was a reopening of the same series of *Certificados Bursátiles* due 2019 originally issued on September 19, 2013 and reopened on December 11, 2013; and the second at a fixed rate of 3.94% in an aggregate principal amount of 588,434,900 UDIs equivalent to Ps. 3,000,000,000 due 2026. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 300,000,000,000 or UDI equivalent *Certificados Bursátiles* Dual Program. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On March 20, 2014, Petróleos Mexicanos borrowed U.S. \$1,000,000,000 from its revolving credit line, which bears interest at a floating rate linked to the London Interbank Offered Rate (LIBOR) plus 0.16%. This drawdown has been renewed on a monthly basis and remains outstanding as of the date of this report.
- On March 21, 2014, Petróleos Mexicanos obtained a loan for U.S. \$300,000,000 from an export credit agency, which bears interest at a rate of 1.08% and matures in March 2018.
- On April 16, 2014, Petróleos Mexicanos issued €1,000,000,000 of its 3.75% Notes due 2026. These notes were issued under Petróleos Mexicanos' U.S. \$42,000,000,000 Medium-Term Notes Program, Series C. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On May 30, 2014, Petróleos Mexicanos obtained a loan for Ps. 10,000,000,000 from its revolving credit line bearing interest at a floating rate linked to the TIIE, which matured on July 2, 2014 and therefore did not affect net indebtedness in 2014.
- On June 2, 2014, Petróleos Mexicanos obtained loans for U.S. \$1,250,000,000 and U.S. \$250,000,000 from its revolving credit line, which bears interest at a floating rate linked to LIBOR and matured in 2014.
- On July 2, 2014, Petróleos Mexicanos issued Ps. 11,000,000,000 aggregate principal amount of its *Certificados Bursátiles* due 2024 at a fixed rate of 7.19%, consisting of (1) an international offering outside of Mexico of Ps. 2,353,100,000 of *Certificados Bursátiles* in the form of GDNs and (2) a concurrent offering to the public in Mexico of Ps. 8,646,900,000 of *Certificados Bursátiles* not represented by GDNs. The issuance represented the third reopening of its *Certificados Bursátiles* due 2024, which were originally issued on September 26, 2013 and subsequently reopened on December 11, 2013 and January 30, 2014. Petróleos Mexicanos concurrently issued in the Mexican market Ps. 4,000,000,000 aggregate principal amount of *Certificados Bursátiles* in two tranches: (1) the first at a floating rate due 2019 in an aggregate principal amount of Ps. 1,500,000,000, which was a reopening of the same series originally issued on September 19, 2013 and subsequently reopened on December 11, 2013 and January 30, 2014 and (2) the second at a fixed rate of 3.94% due 2026 in an aggregate principal amount of 487,171,500 UDIs, equivalent to Ps. 2,500,000,000, which was a reopening of the same series originally issued on January 30, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 200,000,000,000 or UDI equivalent *Certificados Bursátiles* Program. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.

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- On July 25, 2014, Petróleos Mexicanos entered into a syndicated credit facility in the amount of Ps. 26,000,000,000. The facility bears interest at a floating rate linked to the TIIE plus 0.95% and matures on July 25, 2024.
- On July 29, 2014, Petróleos Mexicanos amended the terms of its revolving credit facility entered into on December 22, 2011 in order to decrease the amount available thereunder from Ps. 10,000,000,000 to Ps. 3,500,000,000.
- On September 8, 2014, Petróleos Mexicanos amended the terms of its syndicated credit facility entered into on July 25, 2014 in order to increase the amount available thereunder from Ps. 26,000,000,000 to Ps. 30,000,000,000. The facility bears interest at a floating rate linked to the TIIE and matures on July 25, 2024. On September 10, 2014, Petróleos Mexicanos borrowed the full amount available under this facility.
- On September 11, 2014, Petróleos Mexicanos issued Ps. 19,999,269,100 aggregate principal amount of *Certificados Bursátiles* due 2024 at a fixed rate of 7.19%, consisting of (1) an international offering outside of Mexico of Ps. 3,418,200 of *Certificados Bursátiles* in the form of GDNs and (2) a concurrent offering to the public in Mexico of Ps. 16,581,069,100 of *Certificados Bursátiles* not represented by GDNs. This issuance represented the fourth reopening of Petróleos Mexicanos' *Certificados Bursátiles* due 2024, which were originally issued on September 26, 2013 and subsequently reopened on December 11, 2013, January 30, 2014 and July 2, 2014. Petróleos Mexicanos concurrently issued in the Mexican market *Certificados Bursátiles* in two tranches: (1) one at a floating rate linked to the TIIE plus 0.01% due 2019 in an aggregate principal amount of Ps. 5,000,000,000, which was the fourth reopening of the same series originally issued on September 19, 2013 and subsequently reopened on December 11, 2013, January 30, 2014 and July 2, 2014 and (2) the second at a fixed rate of 3.94% due 2026 in an aggregate principal amount of 968,671,700 UDIs, equivalent to Ps. 5,000,730,842, which was the second reopening of the same series originally issued on January 30, 2014 and subsequently reopened on July 2, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 200,000,000,000 or UDI equivalent *Certificados Bursátiles* Program. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On October 14, 2014, Petróleos Mexicanos issued U.S. \$500,000,000 of notes due 2025, which bear interest at LIBOR for three months plus 0.35%. The notes are guaranteed by the Export-Import Bank of the United States.
- On October 15, 2014, Petróleos Mexicanos issued U.S. \$2,500,000,000 of debt securities under its U.S. \$42,000,000,000 Medium-Term Notes Program, Series C, in two tranches: (1) U.S. \$1,000,000,000 of its 4.250% Notes due 2025 and (2) U.S. \$1,500,000,000 of its 5.50% Bonds due 2044, which was the second reopening of its 5.50% Bonds due 2044 originally issued on June 26, 2012 and subsequently reopened on October 19, 2012. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On October 20, 2014, Petróleos Mexicanos issued U.S. \$500,000,000 of notes due 2025, which bear interest at a fixed rate of 2.378%. The notes are guaranteed by the Export-Import Bank of the United States.
- On November 14, 2014, Petróleos Mexicanos redeemed the U.S. \$1,500,000,000,000 outstanding principal amount of its 4.875% Notes due 2015 and the U.S. \$234,915,000 outstanding principal amount of its 5.750% Notes due 2015.
- On November 19, 2014, Petróleos Mexicanos entered into a revolving credit facility in the amount of Ps. 20,000,000,000. The facility bears interest at a floating rate linked to the TIIE and matures on November 19, 2019. On November 21, 2014 Petróleos Mexicanos borrowed Ps. 20,000,000,000 under this facility.

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- On November 27, 2014, Petróleos Mexicanos issued in the Mexican market Ps. 15,000,000,000 aggregate principal amount of *Certificados Bursátiles* in three tranches: one at a fixed rate of 7.47% due 2026 in an aggregate principal amount of Ps. 8,301,388,800; the second at a floating rate linked to the TIIE plus 0.15% due 2020 in an aggregate principal amount of Ps. 5,000,000,000; and the third at a fixed rate of 3.94% due 2026 in an aggregate principal amount of 325,000,000 UDIs, equivalent to Ps. 1,698,611,200, which was the third reopening of the same series originally issued on January 30, 2014 and subsequently reopened on July 2, 2014 and September 11, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 200,000,000,000 or UDI equivalent *Certificados Bursátiles* Program. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services as of the date of this annual report.
- On December 15, 2014, Petróleos Mexicanos obtained a loan for Ps. 3,500,000,000 bearing interest at a floating rate, which was repaid on March 17, 2015.
- On December 17, 2014, Petróleos Mexicanos entered into a credit facility in the amount of U.S. \$700,000,000 bearing interest at LIBOR plus 0.85%. On December 19, 2014, Petróleos Mexicanos borrowed U.S. \$700,000,000 under this facility, which was repaid in full on February 5, 2015.
- On December 18, 2014, one of our subsidiary companies, Pro-Agroindustria, S.A. de C.V., obtained a credit line for U.S. \$390,000,000, with each drawdown bearing interest at LIBOR plus 1.40% on a quarterly basis. On the same date, Pro-Agroindustria, S.A. de C.V. borrowed U.S. \$228,000,000, which matures on December 18, 2017.
- On December 19, 2014, Petróleos Mexicanos obtained a loan for Ps. 10,000,000,000 in two tranches: (1) Ps. 5,000,000,000 bearing interest at a floating rate linked to the TIIE plus 1.25% due 2025 and (2) Ps. 5,000,000,000 at a floating rate linked to the TIIE plus 0.95% with quarterly installments due 2025.
- On December 23, 2014, Petróleos Mexicanos obtained a loan for Ps. 10,000,000,000 bearing interest at a floating rate linked to the TIIE plus 0.85% with quarterly installments, which matures on March 19, 2025.
- From January 1 to December 31, 2014, P.M.I. Holdings B.V. obtained U.S. \$7,075,000,000 in financing from its revolving credit line and repaid U.S. \$7,125,000,000. As of December 31, 2014, the outstanding amount under this revolving credit line was U.S. \$500,000,000.

*Indebtedness*

During 2015, our total debt increased by 30.6%, from Ps. 1,143.3 billion at December 31, 2014 to Ps. 1,493.4 billion at December 31, 2015, primarily due to the financing activities undertaken during this period, as described in Note 15 to our consolidated financial statements included herein.

As of December 31, 2015 and as of the date of this annual report, we were not in default on any of our financing agreements.

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The following table sets forth the analysis of our total indebtedness (not including accrued interest) as of December 31, 2015 based on short- and long-term debt and fixed or floating rates:

	<b>In millions of U.S. dollars</b>
<b>Short-term debt</b>	
Short-term bonds with floating interest rates	U.S. \$ 706
Lines of credit with variable interest rates established under committed credit facilities with various international commercial banks	7,249
Lines of credit with fixed interest rates	2,159
<b>Total short-term debt<sup>(1)</sup></b>	<b><u>U.S. \$ 10,114</u></b>
<b>Long-term debt</b>	
<b>Fixed rate instruments</b>	
Instruments with fixed annual interest rates ranging from 1.5% to 10.61% and maturities ranging from 2017 to 2046 and perpetual bonds with no maturity date	U.S. \$ 61,480
<b>Variable rate instruments</b>	
Drawings under lines of credit based on LIBOR and other variable rates with maturities ranging from 2017 to 2025	9,262
Floating rate notes with maturities ranging from 2017 to 2025	4,862
<b>Total variable rate instruments</b>	<u>14,124</u>
<b>Total long-term debt</b>	<u>75,604</u>
<b>Total indebtedness<sup>(1)</sup></b>	<b><u>U.S. \$ 85,717</u></b>

Note: Numbers may not total due to rounding.

(1) Excludes U.S. \$1,074.5 million of accrued interest and includes notes payable to contractors.

The table below sets forth our total indebtedness as of December 31 for each of the three years from 2013 to 2015.

**Total Indebtedness of PEMEX**

	<b>As of December 31,<sup>(1)</sup></b>		
	<b>2013</b>	<b>2014</b>	<b>2015</b>
	<b>(in millions of U.S. dollars)<sup>(2)</sup></b>		
Domestic debt in various currencies	U.S.\$ 12,709	U.S.\$ 19,856	U.S.\$ 19,415
External debt in various currencies <sup>(3)</sup>			
Bonds <sup>(4)</sup>	39,654	44,445	52,981
Direct loans	3,848	6,473	7,486
Project financing <sup>(5)</sup>	5,977	4,916	4,816
Financial leases	302	263	536
Notes payable to contractors	1,092	795	483
<b>Total external debt</b>	<b><u>U.S. \$ 50,873</u></b>	<b><u>U.S. \$ 56,892</u></b>	<b><u>U.S. \$ 66,302</u></b>
<b>Total indebtedness</b>	<b><u>U.S. \$ 63,582</u></b>	<b><u>U.S. \$ 76,748</u></b>	<b><u>U.S. \$ 85,717</u></b>

Note: Numbers may not total due to rounding.

(1) Figures do not include accrued interest. Accrued interest was U.S. \$751.0 million, U.S. \$928.9 million and U.S. \$1,074.5 million at December 31, 2013, 2014 and 2015, respectively.

(2) Indebtedness payable in currencies other than U.S. dollars was first converted into pesos for accounting purposes at the exchange rates set by *Banco de México* and then converted from pesos to U.S. dollars at the following exchange rates: Ps. 13.0765 = U.S. \$1.00 for 2013, Ps. 14.7180 = U.S. \$1.00 for 2014 and Ps. 17.2065 = U.S. \$1.00 for 2015. See Notes 3 and 15 to our consolidated financial statements included herein.

(3) Indebtedness payable other than in pesos and owed to persons or institutions having their head offices or chief places of business outside of Mexico and payable outside the territory of Mexico.

(4) Includes, as of December 31, 2013, 2014 and 2015, U.S. \$0.49 billion, U.S. \$0.39 billion and U.S. \$0.275 billion, respectively, of bonds issued by Pemex Finance, Ltd. See "—Financing Activities of Pemex Finance, Ltd." below.

(5) All credits included in this line are insured or guaranteed by export credit agencies.

Source: PEMEX's consolidated financial statements, prepared in accordance with IFRS.

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[Table of Contents](#)*Financing Activities of Pemex Finance, Ltd.*

Commencing on December 1, 1998, Petróleos Mexicanos, Pemex-Exploration and Production, PMI and P.M.I. Services, B.V. have entered into several agreements with Pemex Finance, Ltd. Under these contracts, Pemex Finance, Ltd. purchases certain existing PMI accounts receivable for crude oil as well as certain accounts receivable to be generated in the future by PMI related to crude oil. The receivables sold are those generated by the sale of Maya and Altamira crude oil to designated customers in the United States, Canada and Aruba. The net proceeds obtained by Pemex Exploration and Production, which assumed all of the rights and obligations of Pemex-Exploration and Production under these agreements, from the sale of such receivables under the agreements are utilized for capital expenditures. Pemex Finance, Ltd. obtains resources for the acquisition of such accounts receivable through the placement of debt instruments in the international markets.

On July 1, 2005, we entered into an option agreement with BNP Paribas Private Bank and Trust Cayman Limited giving us an option to acquire 100% of the shares of Pemex Finance, Ltd. As a result, the financial results of Pemex Finance, Ltd. under IFRS are consolidated into our financial statements, and PMI's sales of accounts receivable to Pemex Finance, Ltd. have been reclassified as debt. Our option to purchase the shares of Pemex Finance, Ltd. can only be exercised once its remaining debt, approximately U.S. \$275.0 million in aggregate principal amount as of December 31, 2015, has been redeemed.

As of December 31, 2015, the outstanding debt of Pemex Finance, Ltd. was composed of U.S. \$275.0 million aggregate principal amount of fixed rate notes with maturities ranging from 2016 to 2018 and interest rates between 9.15% and 10.61% and accrued interest of U.S. \$2.5 million.

*2016 Financing Activities.* During the first four months of 2016, Pemex Finance, Ltd. made payments of U.S. \$28.1 million in principal of its notes. Pemex Finance, Ltd. did not incur any additional indebtedness during the first four months of 2016.

*2015 Financing Activities.* During 2015, Pemex Finance, Ltd. made payments of U.S. \$112.5 million in principal of its notes. Pemex Finance, Ltd. did not incur any additional indebtedness during 2015.

*2014 Financing Activities.* During 2014, Pemex Finance, Ltd. made payments of U.S. \$103.3 million in principal of its notes. Pemex Finance, Ltd. did not incur any additional indebtedness during 2014.

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*Contractual Obligations and Off-Balance Sheet Arrangements*

Information about our long-term contractual obligations and off-balance sheet arrangements outstanding as of December 31, 2015 is set forth below. This information is important in understanding our financial position. In considering the economic viability of investment opportunities we view any source of financing, for example, operating leases or sales of future accounts receivable, as being economically equivalent to consolidated debt.

**Contractual Obligations as of December 31, 2015<sup>(1)</sup>**

	Payments due by period				
	Total	Less than 1 year	1-3 years	4-5 years	After 5 years
		(in millions of U.S. dollars)			
Contractual obligations recognized in balance sheet:					
Debt <sup>(2)</sup>	U.S.\$ 85,773	U.S.\$ 10,843	U.S.\$ 11,688	U.S.\$ 15,985	U.S.\$ 47,257
Notes payable to contractors <sup>(3)</sup>	482	272	116	52	42
Capital lease obligations <sup>(4)</sup>	535	73	155	97	210
Other long-term liabilities:					
Dismantlement and abandonment costs obligations <sup>(5)</sup>	3,307	85	523	393	2,306
Employee benefits plan <sup>(6)</sup>	74,355	3,369	6,791	7,568	56,627
<b>Total contractual obligations recognized in balance sheet</b>	<b>164,452</b>	<b>14,642</b>	<b>19,273</b>	<b>24,095</b>	<b>106,442</b>
Other contractual obligations not recognized in liabilities:					
Infrastructure works contracts <sup>(7)</sup>	57,635	22,594	17,278	7,434	10,329
Financed Public Works Contracts (FPWC) <sup>(8)</sup>	454	202	69	68	115
Nitrogen supply contracts <sup>(9)</sup>	518	62	86	86	284
<b>Total contractual obligations not recognized in liabilities<sup>(10)</sup></b>	<b>58,607</b>	<b>22,858</b>	<b>17,433</b>	<b>7,588</b>	<b>10,728</b>
<b>Total contractual obligations</b>	<b>U.S. \$ 223,059</b>	<b>U.S. \$ 37,500</b>	<b>U.S. \$ 36,706</b>	<b>U.S. \$ 31,683</b>	<b>U.S. \$ 117,170</b>

Note: Numbers may not total due to rounding.

(1) All amounts calculated in accordance with IFRS.

(2) See Note 15 to our consolidated financial statements included herein. Figures in this line item do not include notes payable to contractors and capital lease obligations, which are presented in separate line items, but do include accrued interest as of December 31, 2015.

(3) See Note 15 to our consolidated financial statements included herein.

(4) See Note 15 to our consolidated financial statements included herein.

(5) See Notes 3(k) and 12(c) to our consolidated financial statements included herein.

(6) See Note 17 to our consolidated financial statements included herein.

(7) See Note 24(f) to our consolidated financial statements included herein.

(8) The amounts presented for Financed Public Works Contracts in this table correspond to works the performance and delivery of which by the relevant contractors are pending. For more information on the FPWC program, see "Item 4—Information on the Company—Business Overview—Pemex Exploration and Production—Integrated Exploration and Production Contracts and Financed Public Works Contracts" and Note 24(d) to our consolidated financial statements included herein.

(9) See Notes 24(b) and (c) to our consolidated financial statements included herein.

(10) No amounts have been included for Integrated E&P Contracts in this table, since payments for these contracts will be made on a per-barrel basis and performance and delivery by the relevant contractors is pending. For more information on the Integrated E&P Contracts program, see "Item 4—Information on the Company—Business Overview—Pemex Exploration and Production—Integrated Exploration and Production Contracts and Financed Public Works Contracts" and Note 24(e) to our consolidated financial statements included herein.

Source: PEMEX's consolidated financial statements, prepared in accordance with IFRS.

As of December 31, 2015, we did not have any off-balance sheet arrangements of the type that we are required to disclose under Item 5.E of Form 20-F.

See "Item 11—Quantitative and Qualitative Disclosures about Market Risk" for more information regarding the fair value of our derivative contracts in connection with natural gas trading activities as of December 31, 2015.

**Results of Operations by Business Segment**

This section presents the results of our operations by business segment, including our central corporate operations and the operations of the consolidated subsidiary companies.

As further described under "Item 4—Information on the Company—History and Development—Recent Energy Reform—Corporate Reorganization" and Note 1 to our consolidated financial statements included herein, as a result of the recent energy

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reform, we have undergone a corporate reorganization that created new business segments and redistributed the operation of certain business units to different business segments. Accordingly, the results for the business segments presented as of and for the year ended December 31, 2015 are reflect different business segments from those presented as of and for the years-ended December 31, 2014 and 2013.

*Revenue by Business Segment*

The following table sets forth our trade and intersegment net sales revenues by business segment for the fiscal years ended December 31, 2013, 2014 and 2015 as well as the percentage change in sales revenues for those years.

	Year Ended December 31, 2013 2014 2015 (in millions of pesos) <sup>(1)</sup>			2014 vs. 2013 (%)	2015 vs. 2014 (%)
<b>Exploration and Production<sup>(4)</sup></b>					
Trade sales <sup>(2)</sup>	—	—	—	—	—
Intersegment sales	Ps. 1,250,772	Ps. 1,134,520	Ps. 690,642	(9.3)	(39.1)
Total net sales	1,250,772	1,134,520	690,642	(9.3)	(39.1)
<b>Refining</b>					
Trade sales <sup>(2)(3)</sup>	744,497	763,005	589,548	2.5	(22.7)
Intersegment sales	74,894	78,453	54,876	4.8	(30.0)
Total net sales	819,391	841,458	644,424	2.7	(23.4)
<b>Gas and Basic Petrochemicals</b>					
Trade sales <sup>(2)(3)</sup>	145,471	159,754	137,456	9.8	(14.0)
Intersegment sales	73,998	84,198	55,594	13.8	(34.0)
Total net sales	219,469	243,952	193,050	11.2	(20.9)
<b>Petrochemicals<sup>(5)</sup></b>					
Trade sales <sup>(2)</sup>	26,525	29,074	20,735	9.6	(28.7)
Intersegment sales	13,840	15,182	15,824	9.7	4.2
Total net sales	40,365	44,256	36,559	9.6	(17.4)
<b>Drilling and Services<sup>(6)</sup></b>					
Trade sales <sup>(2)</sup>	n.a	n.a	n.a	n.a	n.a
Intersegment sales	n.a	n.a	1,512	n.a	100.0
Total net sales			1,512	n.a	100.0
<b>Logistics<sup>(7)</sup></b>					
Trade sales <sup>(2)</sup>	n.a	n.a	10,356	n.a	100.0
Intersegment sales	n.a	n.a	599	n.a	100.0
Total net sales			10,955	n.a	100.0
<b>Cogeneration and Services<sup>(8)</sup></b>					
Trade sales <sup>(2)</sup>	n.a	n.a	0	n.a	n.a
Intersegment sales	n.a	n.a	0	n.a	n.a
Total net sales			0	n.a	n.a
<b>Fertilizers<sup>(9)</sup></b>					
Trade sales <sup>(2)</sup>	n.a	n.a	1,496	n.a	100.0
Intersegment sales	n.a	n.a	209	n.a	100.0
Total net sales			1,705	n.a	100.0
<b>Ethylene<sup>(10)</sup></b>					
Trade sales <sup>(2)</sup>	n.a	n.a	4,569	n.a	100.0
Intersegment sales	n.a	n.a	474	n.a	100.0
Total net sales			5,043	n.a	100.0
<b>Trading Companies</b>					
Trade sales <sup>(2)(3)</sup>	688,464	631,069	407,876	(8.3)	(35.4)
Intersegment sales	407,664	433,732	353,137	6.4	(18.6)
Total net sales	1,096,129	1,064,801	761,013	(2.9)	(28.5)
<b>Corporate and other subsidiary companies</b>					
Trade sales <sup>(2)(3)</sup>	3,247	3,826	(5,673)	17.8	(248.3)
Intersegment sales and eliminations	(1,821,168)	(1,746,085)	(1,172,868)	(4.1)	(32.8)
Total net sales	(1,817,921)	(1,742,259)	(1,178,541)	(4.2)	(32.4)
<b>Total net sales</b>	<b>Ps. 1,608,205</b>	<b>Ps. 1,586,728</b>	<b>Ps. 1,166,362</b>	<b>(1.3)</b>	<b>(26.5)</b>



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Note: Numbers may not total due to rounding.

- (1) Figures for 2013, 2014 and 2015 are stated in nominal pesos.
- (2) Trade sales represent sales to external customers. See "Item 3—Key Information—Selected Financial Data."
- (3) Includes services income.
- (4) Figures for the exploration and production segment for the year ended December 31, 2015 include net sales revenue related to the drilling and services segment until the formation of Pemex Drilling and Services on August 1, 2015 and to the logistics segment until the formation of Pemex Logistics on October 1, 2015.
- (5) Figures for the petrochemicals segment for the year ended December 31, 2015 include net sales revenue related to the ethylene segment until the formation of Pemex Ethylene on October 1, 2015 and to the fertilizers segment until the formation of Pemex Fertilizers on October 1, 2015.
- (6) Figures for the drilling and services segment for the year ended December 31, 2015 refer to net sales revenue since August 1, 2015 when Pemex Drilling and Services was formed.
- (7) Figures for the logistics segment for the year ended December 31, 2015 refer to net sales revenue since October 1, 2015 when Pemex Logistics was formed.
- (8) Figures for the cogeneration and services segment year ended December 31, 2015 refer to net sales revenue since June 1, 2015 when Pemex Cogeneration and Services was formed.
- (9) Figures for the fertilizers segment for the year ended December 31, 2015 refer to net sales revenue since October 1, 2015 when Pemex Fertilizers was formed.
- (10) Figures for the ethylene segment for the year ended December 31, 2015 refer to net sales revenue since October 1, 2015 when Pemex Ethylene was formed.

Source: PEMEX's consolidated financial statements, prepared in accordance with IFRS.

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*Income by Business Segment*

The following table sets forth our net income (loss) by business segment for each year in the three-year period ended December 31, 2015, as well as the percentage change in income for the years 2013 to 2015.

	Year Ended December 31,			2014	2015
	2013	2014	2015	vs. 2013	vs. 2014
	(in millions of pesos) <sup>(1)</sup>			(%)	(%)
<b>Business Segment</b>					
Exploration and Production <sup>(2)</sup>	Ps. (42,084)	Ps. (153,377)	Ps. (667,394)	(264.5)	(335.1)
Refining	(123,015)	(113,826)	(113,147)	(7.5)	(0.6)
Gas and Basic Petrochemicals	3,909	15,584	18,126	298.7	16.3
Petrochemicals <sup>(3)</sup>	(14,936)	(18,895)	7,812	(26.5)	141.3
Drilling and Services <sup>(4)</sup>	n.a	n.a	455		100
Logistics <sup>(5)</sup>	n.a	n.a	(3,685)		100
Cogeneration and Services <sup>(6)</sup>	n.a	n.a	(57)		100
Fertilizers <sup>(7)</sup>	n.a	n.a	(145)		100
Ethylene <sup>(8)</sup>	n.a	n.a	(1,755)		100
Trading Companies	2,973	4,085	8,697	37.4	112.9
Corporate and other subsidiary companies <sup>(9)</sup>	3,094	886	38,526	(71.4)	4,245.3
<b>Total net income (loss)</b>	<b>Ps. (170,058)</b>	<b>Ps. (265,543)</b>	<b>Ps. (712,567)</b>	<b>(56.1)</b>	<b>(168.3)</b>

Note: Numbers may not total due to rounding.

(1) Figures are stated in nominal pesos. See "Item 3—Key Information—Selected Financial Data."

(2) Figures for the exploration and production segment for the year ended December 31, 2015 include net income (loss) related to the drilling and services segment until the formation of Pemex Drilling and Services on August 1, 2015 and to the logistics segment until the formation of Pemex Logistics on October 1, 2015.

(3) Figures for the petrochemicals segment for the year ended December 31, 2015 include net income (loss) related to the ethylene segment until the formation of Pemex Ethylene on October 1, 2015 and to the fertilizers segment until the formation of Pemex Fertilizers on October 1, 2015.

(4) Figures for the drilling and services segment for the year ended December 31, 2015 refer to net income (loss) since August 1, 2015 when Pemex Drilling and Services was formed.

(5) Figures for the logistics segment for the year ended December 31, 2015 refer to net income (loss) since October 1, 2015 when Pemex Logistics was formed.

(6) Figures for the cogeneration and services segment year ended December 31, 2015 refer to net income (loss) since June 1, 2015 when Pemex Cogeneration and Services was formed.

(7) Figures for the fertilizers segment for the year ended December 31, 2015 refer to net income (loss) since October 1, 2015 when Pemex Fertilizers was formed.

(8) Figures for the ethylene segment for the year ended December 31, 2015 refer to net income (loss) since October 1, 2015 when Pemex Ethylene was formed.

(9) Includes intersegment eliminations.

n.a. not available.

Source: PEMEX's consolidated financial statements, prepared in accordance with IFRS.

**2015 Compared to 2014**

As discussed above, certain business units and assets that were operated by our exploration and production segment were transferred to our drilling and services segment upon the formation Pemex Drilling and Services on August 1, 2015, and certain business units and assets that were operated by our exploration and production, refining and gas and basic petrochemicals segments were transferred to our logistics segment upon the formation of Pemex Logistics on October 1, 2015. Similarly, certain business units and assets that were operated by our petrochemicals segment were transferred to our ethylene and fertilizers segments upon the formation of Pemex Ethylene and Pemex Fertilizers on August 1, 2015 and certain business units and assets that were operated by the gas and basic petrochemicals segment were transferred to the cogeneration and services segment upon the formation of Pemex Cogeneration and Services on June 1, 2015. As detailed in the table above, we have started reporting financial information for these new segments from and after their formation in 2015.

However, in order to provide investors with comparative information, we have consolidated these new segments into the segments that previously included the business units and assets of these new segments here and in Note 5 to our consolidated financial statements included herein. Accordingly, in the case of our exploration and production segment below, we present consolidated results for 2015 of the exploration and production segment, the drilling and services segment and the logistics segment under the heading "Exploration and Production"; in the case of our refining segment, we present consolidated results for 2015 of the refining segment and part of the logistics segment under the heading "Refining"; in the case of our petrochemicals

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segment below, we present consolidated results for 2015 of the petrochemicals segment, the ethylene segment and the fertilizers segment under the heading “Petrochemicals”; and in the case of our gas and basic petrochemicals segment below, we present consolidated results for 2015 of the gas and basic petrochemicals segment, part of the logistics segment and the cogeneration and services segment under the heading “Gas and Basic Petrochemicals.” For more information on our corporate restructuring and our new operating segments, see “Item 4—Information on the Company—History and Development—Recent Energy Reform—Corporate Reorganization” and Note 1 to our consolidated financial statements included herein. For a detailed description of the financial results of each segment, see Note 5 to our consolidated financial statements included herein. The following sections compare results of operations for our main segments prior to our recent corporate reorganization for 2015 as compared to 2014 and 2014 as compared to 2013.

### *Exploration and Production*

As compared to 2014, our exploration and production segment’s sales of crude oil to the PMI Group in 2015 decreased by 39.1% in peso terms and decreased by 49.4% in U.S. dollar terms, primarily due to a decrease in crude oil export prices. The weighted average price of crude oil sold by our exploration and production segment to the PMI Group for export was U.S. \$42.70 in 2015, as compared to U.S. \$86.00 in 2014. Total intersegment sales, which include sales to our refining segment, our gas and basic petrochemicals segment and the PMI Group, decreased by 39.1%, primarily due to the decrease in crude oil export prices. Net loss related to exploration and production activities increased by 335.1%, or Ps. 514,017 million, from a Ps. 153,377 million loss in 2014 to a Ps. 667,394 million loss in 2015, primarily due to a decrease in the average price of crude oil.

### *Refining*

In 2015, trade sales related to refining activities (including services income) decreased by 22.7%, from Ps. 763,005 million in 2014 to Ps. 589,548 million in 2015, primarily due to a decrease in the average sales prices of petroleum products. Intersegment sales decreased by Ps. 23,577 million, or 30.0%, from Ps. 78,453 million in 2014 to Ps. 54,876 million in 2015, primarily due to a decrease in the prices of petroleum products sold. In 2015, our total loss related to refining activities was Ps. 113,148 million, 0.6% lower than the loss of Ps. 113,826 million in 2014. The decrease in loss was primarily due to higher prices of petroleum products during 2015, which was partially offset by a decrease in other income due to the negative IEPS tax.

### *Gas and Basic Petrochemicals*

In 2015, trade sales related to the natural gas and basic petrochemical segment (including services income) decreased by 14.0%, from Ps. 159,754 million in 2014 to Ps. 137,456 million in 2015. LPG sales increased by 0.1%, from Ps. 78,084 million in 2014 to Ps. 78,194 million in 2015, primarily due to an increase in LPG prices. Natural gas sales decreased by 30.0%, from Ps. 77,813 million in 2014 to Ps. 54,498 million in 2015, primarily due to a decrease in the volume and prices of natural gas. Net income related to natural gas and basic petrochemicals increased by 16.3%, from Ps. 15,584 million in 2014 to Ps. 18,126 million in 2015, primarily due to a decrease in purchases of imported LPG and cost of employee benefits.

### *Petrochemicals*

In 2015, trade sales related to the petrochemicals segment decreased by 28.7%, from Ps. 29,074 million in 2014 to Ps. 20,735 million in 2015. Prices for petrochemicals sold domestically decreased for a majority of our petrochemical products. In 2015, the volume of petrochemical exports decreased by 40.4%, from 527.1 thousand tons in 2014 to 313.9 thousand tons in 2015. Losses related to petrochemical activities decreased by 141.3%, from Ps. 18,895 million in 2014 to profit Ps. 7,812 million in 2015, primarily due to: (1) a 24.9% decrease in the cost of sales in 2015; (2) a decrease in the prices of raw materials; and (3) a decrease in the cost of employee benefits.

### *Trading Companies*

In 2015, trade sales relating to the PMI Group’s exports of crude oil and petroleum products to third parties (including services income) decreased in peso terms, from Ps. 631,069 million in 2014 to Ps. 407,876 million in 2015, primarily as a result of a decrease in the prices of crude oil exports. In 2015, net income related to the PMI Group increased by 112.9%, from Ps. 4,085 million in 2014 to Ps. 8,697 million, primarily due to lower taxes and sale.

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### *Corporate and Other Subsidiary Companies*

In 2015, the trade sales relating to corporate and other subsidiary companies after inter-company eliminations decreased, from Ps. 1,742,259 million in 2014 to Ps. 1,178,541 million in 2015, primarily due to lower revenues from services. Net income related to corporate and other subsidiary companies after inter-company eliminations increased, from Ps. 886 million in 2014 to Ps. 38,526 million in 2015, primarily due to favorable results from subsidiary companies.

### **2014 Compared to 2013**

#### *Exploration and Production*

As compared to 2013, our exploration and production segment's sales of crude oil to the PMI Group in 2014 decreased by 13.3% in peso terms and decreased by 16.5% in U.S. dollar terms, primarily due to a decrease in the volume of crude oil exports. The weighted average price of crude oil sold by our exploration and production segment to the PMI Group for export was U.S. \$86.00 in 2014, as compared to U.S. \$98.46 in 2013. Total intersegment sales, which include sales to our refining segment, our business gas and basic petrochemicals segment and the PMI Group, decreased by 9.3%, primarily due to the decrease in crude oil export prices. Net loss related to exploration and production activities increased by 264.5%, or Ps. 111,293 million, from a Ps. 42,084 million loss in 2013 to a Ps. 153,377 million loss in 2014, primarily due to a decrease in the average price of crude oil.

#### *Refining*

In 2014, trade sales related to refining activities (including services income) increased by 2.5%, from Ps. 744,497 million in 2013 to Ps. 763,005 million in 2014, primarily due to an increase in the average sales prices of petroleum products. Intersegment sales increased by Ps. 3,559 million, or 4.8%, from Ps. 74,894 million in 2013 to Ps. 78,453 million in 2014, primarily due to an increase in the prices of petroleum products sold. In 2014, our total loss related to refining activities was Ps. 113,826 million, 7.5% lower than the loss of Ps. 123,015 million in 2013. The decrease in loss was primarily due to higher prices of petroleum products during 2014, which was partially offset by a decrease in other revenues, net.

#### *Gas and Basic Petrochemicals*

In 2014, trade sales related to the natural gas and basic petrochemical segment (including services income) increased by 9.8%, from Ps. 145,471 million in 2013 to Ps. 159,754 million in 2014. LPG sales increased by 9.7%, from Ps. 71,148 million in 2013 to Ps. 78,084 million in 2014, primarily due to an increase in LPG prices. Natural gas sales increased by 13.6%, from Ps. 68,490 million in 2013 to Ps. 77,813 million in 2014, primarily due to an increase in the volume and prices of natural gas. Net income related to natural gas and basic petrochemicals increased by 298.7%, from Ps. 3,909 million in 2013 to Ps. 15,584 million in 2014, primarily due to an increase in domestic sales.

#### *Petrochemicals*

In 2014, trade sales related to the petrochemicals segment increased by 9.6%, from Ps. 26,525 million in 2013 to Ps. 29,074 million in 2014. Prices for petrochemicals sold domestically increased for a majority of our petrochemical products. In 2014, the volume of petrochemical exports decreased by 12.9%, from 605.4 thousand tons in 2013 to 527.1 thousand tons in 2014. Losses related to petrochemical activities increased by 26.5%, from Ps. 14,936 million in 2013 to Ps. 18,895 million in 2014, primarily due to: (1) a 10.4% increase in the cost of sales in 2014; (2) an increase in the prices of raw materials; and (3) an increase in the volume of raw materials used in connection with the reopening of the aromatics plant at the Cangrejera petrochemical complex.

#### *Trading Companies*

In 2014, trade sales relating to the PMI Group's exports of crude oil and petroleum products to third parties (including services income) decreased in peso terms, from Ps. 688,464 million in 2013 to Ps. 631,069 million in 2014, primarily as a result of a decrease in the prices and volume of crude oil exports. In 2014, net income related to the PMI Group increased by 37.4%, from Ps. 2,973 million in 2013 to Ps. 4,085 million in 2014, primarily due to a decrease in its income tax and lower sales.

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*Corporate and Other Subsidiary Companies*

In 2014, the trade sales relating to corporate and other subsidiary companies after inter-company eliminations decreased, from Ps. 1,817,921 million in 2013 to Ps. 1,742,259 million in 2014, primarily due to higher revenues from services. Net income related to corporate and other subsidiary companies after inter-company eliminations decreased, from Ps. 3,094 million in 2013 to Ps. 886 million in 2014, primarily due to the unfavorable results of the subsidiary companies as well as a loss on foreign exchange, net.

**Item 6. Directors, Senior Management and Employees**

Under the new Petróleos Mexicanos Law, Petróleos Mexicanos is governed by a ten-member Board of Directors composed as follows:

- the Secretary of Energy, who serves as the Chairperson and has the right to cast a tie-breaking vote;
- the Secretary of Finance and Public Credit;
- three Mexican Government representatives, who are appointed by the President of Mexico; and
- five independent members, who are appointed by the President of Mexico, subject to ratification by the Senate. Independent members perform their duties on a part-time basis, are not public officials (*i.e.*, individuals holding federal, state or municipal government positions in Mexico) and have not been employed by Petróleos Mexicanos or any of the subsidiary entities during the two years prior to their appointment.

The new Petróleos Mexicanos Law authorizes only the Secretary of Energy and the Secretary of Finance and Public Credit to designate an alternate to serve in his or her place, provided that the alternate is a public official at the undersecretary level, at minimum. This alternate may attend meetings of the Board of Directors of Petróleos Mexicanos and otherwise assume the duties of the director, except that the Chairperson's designated alternate may not cast a tie-breaking vote. In addition, any ministry-level secretary serving as a member of the Board of Directors of Petróleos Mexicanos may designate an alternate to attend meetings on his or her behalf, provided that such alternate is a public official at the undersecretary level, at minimum.

Under the new Petróleos Mexicanos Law, all public officials serving as members of the Board of Directors of Petróleos Mexicanos are required to act impartially and for the benefit and in the best interests of Petróleos Mexicanos, separating at all times the interests of the ministry or governmental entity for which they work from their duties as members of the Board of Directors.

Except in the case of the independent members first appointed under the Petróleos Mexicanos Law, the five independent members will be appointed to staggered five-year terms, and may be appointed for an additional term of the same length. The remaining members of the Board of Directors of Petróleos Mexicanos are not appointed for a specific term.

In 2014, the following individuals were appointed to serve as independent members of the Board of Directors of Petróleos Mexicanos for the initial terms set forth below:

- Mr. Alberto Tiburcio Celorio, for two years;
- Mr. Octavio Francisco Pastrana Pastrana, for three years;
- Mr. Jorge José Borja Navarrete, for four years;
- Mr. Jaime Lomelín Guillén, for five years; and
- Mr. Carlos Elizondo Mayer-Serra, for six years.

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On February 17, 2015, Mr. Jaime Lomelín Guillén resigned from his position as independent member of the Board of Directors of Petróleos Mexicanos. On April 29, 2016, the Senate ratified the appointment of Mr. Felipe Duarte Olvera as an independent member to serve for the remainder of Mr. Lomelín Guillén's term.

Under the new Petróleos Mexicanos Law, each of the boards of directors of the subsidiary entities will consist of not less than five and no more than seven members. The majority of the members of each of the board of directors shall be appointed by and represent the Board of Directors of Petróleos Mexicanos. The Ministry of Energy and the Ministry of Finance and Public Credit may also appoint members to each board of directors of the subsidiary entities, subject to approval by the Board of Directors of Petróleos Mexicanos.

On November 13, 2015, the Board of Directors of Petróleos Mexicanos appointed Mr. Juan Pablo Newman Aguilar as Corporate Director of Finance (Chief Financial Officer) of Petróleos Mexicanos. Mr. Newman Aguilar's appointment became effective on January 1, 2016. Mr. José Antonio González Anaya was appointed Director General (Chief Executive Officer) of Petróleos Mexicanos by the President of Mexico, an appointment that became effective February 8, 2016. Both of these executive officers began performing their functions as of the date their respective appointments became effective, as provided for in the new Petróleos Mexicanos Law and other applicable regulations.

The *Estatuto Orgánico* (Organic Statute) of Petróleos Mexicanos was published in the Official Gazette of the Federation on April 28, 2015. This Organic Statute establishes the structure, organizational basis and functions of the administrative units of Petróleos Mexicanos and also delineates the duties and internal regulations of its Board of Directors.

The following tables set forth certain information with respect to directors and executive officers of Petróleos Mexicanos and each of the subsidiary entities as of April 11, 2016.

**Petróleos Mexicanos—Directors and Executive Officers**

<u>Name</u>	<u>Position with Petróleos Mexicanos</u>	<u>Year Appointed</u>
Mr. Pedro Joaquín Coldwell	<p>Chairman of the Board of Directors of Petróleos Mexicanos and Secretary of Energy</p> <p>Born: 1950</p> <p>Business experience: Chairman of the National Executive Committee of the PRI; Senator of the LXth and LXIst Legislatures; and Chairman of the National Executive Commission of Internal Procedures of the PRI.</p> <p>Other board memberships: Chairman of the Federal Electricity Commission; Chairman of the National Center of Energy Control; Chairman of CENAGAS; Banco Nacional de Comercio Exterior, S.N.C., Institución de Banca de Desarrollo; Nacional Financiera, S.N.C., Institución de Banca de Desarrollo; Comisión Nacional de Vivienda; Instituto Nacional de Ecología y Cambio Climático; Servicio Cozumel, S.A. de C.V.; Gasolinera y Servicios Juárez, S.A. de C.V.; Planta de Combustible Cozumel, S.A. de C.V.; Combustibles Caleta, S.A. de C.V.; Combustibles San Miguel, S.A. de C.V.; and Combustibles Tatich, S.A. de C.V.</p>	2012

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Ildefonso Guajardo Villarreal	<p>Board member of Petróleos Mexicanos and Secretary of Economy</p> <p>Born: 1957</p> <p>Business experience: Federal Deputy of the LXIst Legislature; Local Deputy of Nuevo León; and Chief of the Executive Office of the Governor of Nuevo León.</p> <p>Other board memberships: Aeropuertos y Servicios Auxiliares; Banco del Ahorro Nacional y Servicios Financieros, S.N.C., Institución de Banca de Desarrollo; Banco Nacional de Comercio Exterior, S.N.C., Institución de Banca de Desarrollo; Caminos y Puentes Federales de Ingresos y Servicios Conexos; Centro de Investigación y Docencia Económicas, A.C.; Centro Nacional de Metrología; Centro Nacional de Gas Natural; Comisión Coordinadora para la Negociación de Precios de Medicamentos y otros Insumos para la Salud; Federal Electricity Commission; Chairman of the Comisión Federal de Mejora Regulatoria; Comisión Intersecretarial de Bioseguridad de los Organismos Genéticamente Modificados; Comisión Intersecretarial de Cambio Climático; Chairman of the Comisión Intersecretarial de Compras y Obras de la Administración Pública Federal a la Micro, Pequeña y Mediana Empresa; Comisión Intersecretarial de Desarrollo Social; Comisión Intersecretarial de Gasto Público Financiamiento y Desincorporación; Comisión Intersecretarial de Política Industrial; Comisión Intersecretarial de Precios y Tarifas de los Bienes y Servicios de la Administración Pública Federal; Comisión Intersecretarial de Vivienda; Comisión Intersecretarial para Asuntos de la Frontera Norte; Comisión Intersecretarial para el Desarrollo de los Bioenergéticos; Comisión Intersecretarial para el Desarrollo del Gobierno Electrónico; Comisión Intersecretarial para el Desarrollo Rural Sustentable; Comisión Intersecretarial para el Manejo Sustentable de Mares y Costas; Comisión Intersecretarial para la Coordinación Operativa en los Puntos de Internación al Territorio Nacional; Comisión Intersecretarial para la Atención de Sequías e Inundaciones; Comisión Intersecretarial para la Instrumentación de la Cruzada contra el Hambre; Comisión Intersecretarial para la Prevención y Combate a la Economía Ilegal; Comisión Intersecretarial para la Prevención y Erradicación del Trabajo Infantil y la Protección de Adolescentes Trabajadores en Edad Permitida en México; Comisión Intersecretarial para la Transición Digital; Chairman of the Comisión Intersecretarial para la Prevención Social de la Violencia y la Delincuencia; Comisión Nacional de Inversiones Extranjeras; Comisión Nacional de Vivienda; Comisión Nacional del Agua; Comisión Nacional Forestal; Comisión Nacional para el Conocimiento y Uso de la Biodiversidad; Comisión Nacional para el Desarrollo de los Pueblos Indígenas; Chairman of the Comité de Control y Desempeño Institucional; Comité Intersectorial para la Innovación; Comité Nacional de Productividad; Comité Nacional para el Desarrollo Sustentable de la Caña de Azúcar;</p>	2013

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Name	Position with Petróleos Mexicanos	Year Appointed
	<p>Consejo Consultivo Empresarial para el Crecimiento Económico de México; Chairman of the Consejo Consultivo para el Fomento a la Industria Eléctrica Nacional; Consejo Consultivo de Turismo; Comisión Intersecretarial para el Sector Turístico; Consejo Nacional de Normalización y Certificación de Competencias Laborales; Consejo Mexicano para el Desarrollo Rural Sustentable; Consejo Nacional contra las Adicciones; Consejo Nacional de Ciencia y Tecnología; Consejo General de Investigación Científica, Desarrollo Tecnológico e Innovación; Consejo Nacional de Fomento Educativo; Consejo Nacional de Infraestructura; Consejo Nacional de Protección Civil; Consejo de Salubridad General; Consejo Nacional de Vivienda; Chairman of the Consejo Nacional para la Competitividad de la Micro, Pequeña y Mediana Empresa; Consejo Nacional para la Prevención y Control de las Enfermedades Crónicas no Transmisibles; Consejo Nacional para las Comunidades Mexicanas en el Exterior; El Colegio de la Frontera Norte, A.C.; Chairman of the Fideicomiso de Fomento Minero; Fideicomiso Fondo Institucional para el Fomento de la Ciencia, el Fomento de la Tecnología y el Fomento, Desarrollo y Consolidación de Científicos y Tecnólogos; Fideicomiso e-México; Chairman of the Fideicomiso México Emprende; Chairman of the Fondo de Innovación SE-CONACYT; Gabinete Especializado de México Próspero; Gabinete Especializado de México con Responsabilidad Social; Gabinete Especializado Incluyente; Instituto del Fondo Nacional de Vivienda de los Trabajadores; Instituto del Fondo Nacional para el Consumo de los Trabajadores; Instituto Mexicano de la Juventud; Chairman of the Instituto Mexicano de la Propiedad Industrial; Instituto Nacional de la Infraestructura Física Educativa; Instituto Nacional de las Mujeres; Chairman of the Instituto Nacional del Emprendedor; Nacional Financiera, S.N.C., Institución de Banca de Desarrollo; Chairman of the Fideicomiso Público ProMéxico; Chairman of the Servicio Geológico Mexicano; Servicio Nacional de Capacitación y Asistencia Técnica Rural; Servicio Postal Mexicano; Sistema de Investigación Alfonso Reyes; Sistema de Investigación Benito Juárez; Sistema de Investigación Francisco Villa; Sistema de Investigación Golfo de México; Sistema de Investigación Ignacio Zaragoza; Sistema de Investigación José María Morelos; Sistema de Investigación Justo Sierra; Sistema de Investigación Mar de Cortés; Sistema de Investigación Miguel Hidalgo; and Telecomunicaciones de México.</p>	



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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Ms. María de Lourdes Melgar Palacios	<p>Board Member of Petróleos Mexicanos and Undersecretary of Hydrocarbons of the Ministry of Energy</p> <p>Born: 1962</p> <p>Business experience: Undersecretary of Electricity of the Ministry of Energy; Director of the Center for Sustainability and Businesses of the Instituto Tecnológico y de Estudios Superiores de Monterrey, A.C.; and Independent Consultant on Energy Matters and Professor of Cátedra of the Instituto Tecnológico y de Estudios Superiores de Monterrey, A.C. and the Instituto Tecnológico Autónomo de México, A.C.</p> <p>Other board memberships: Chairwoman of the Comité Consultivo Nacional de Normalización en materia de Hidrocarburos; Consejo Consultivo Empresarial para el Crecimiento Económico de México; Consejo Consultivo para el Fomento de la Industria de Hidrocarburos Nacional; Federal Electricity Commission; CENEGAS; Agencia Nacional de Seguridad Industrial y Protección al Medio Ambiente del Sector Hidrocarburos (Alternate); and Fondo Mexicano del Petróleo para la Estabilización y el Desarrollo (Alternate).</p>	2014
Mr. Luis Videgaray Caso	<p>Board Member of Petróleos Mexicanos and Secretary of Finance and Public Credit</p> <p>Born: 1968</p> <p>Business experience: General Coordinator of the Governmental Transition Team for the President-Elect of Mexico; Federal Deputy and President of the Budget and Public Account Commission of the LXIst Legislature; and Secretary of Finance of the Estado de México.</p> <p>Other board memberships: Aeropuertos y Servicios Auxiliares; Chairman of Casa de Moneda de México; Centro Nacional de Control de Energía; Centro Nacional de Control de Gas; Agencia de Noticias del Estado Mexicano; Agencia Espacial Mexicana; Caminos y Puentes Federales de Ingresos y Servicios Conexos; Chairman of Financiera Nacional de Desarrollo Agropecuario, Rural, Forestal y Pesquero; Fondo de Cultura Económica; Instituto del Fondo Nacional de la Vivienda para los Trabajadores; Instituto del Fondo Nacional para el Consumo de los Trabajadores; Instituto Mexicano de la Radio; Chairman of the Instituto para la Protección al Ahorro Bancario; Chairman of Lotería Nacional para la Asistencia Pública; Chairman of Pronósticos para la Asistencia Pública; Servicio Postal Mexicano; Talleres Gráficos de México; Telecomunicaciones de México; Chairman of Servicio de Administración y Enajenación de Bienes; Aeropuerto Internacional de la Ciudad de México, S.A. de C.V.; Chairman of Agroasemex, S.A., Institución Nacional de Seguros; Chairman of Banco del Ahorro Nacional y Servicios Financieros, S.N.C., Institución de Banca de Desarrollo; Chairman of Banco Nacional de Comercio Exterior, S.N.C., Institución de Banca de Desarrollo; Chairman of Banco Nacional de Obras y Servicios Públicos, S.N.C., Institución de Banca de Desarrollo;</p>	2013

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
	Chairman of Banco Nacional del Ejército, Fuerza Aérea y Armada, S.N.C., Institución de Banca de Desarrollo; Exportadora de la Sal, S.A. de C.V.; Ferrocarril del Istmo de Tehuantepec, S.A. de C.V.; Impresora y Encuadernadora Progreso, S.A. de C.V.; FONATUR Constructora, S.A. de C.V.; FONATUR Operadora Portuaria, S.A. de C.V.; FONATUR Mantenimiento Turístico, S.A. de C.V.; FONATUR Prestadora de Servicios, S.A. de C.V.; Grupo Aeroportuario de la Ciudad de México, S.A. de C.V.; Chairman of Nacional Financiera, S.N.C., Institución de Banca de Desarrollo; Chairman of Seguros de Crédito a la Vivienda SHF, S.A. de C.V.; Chairman of Sociedad Hipotecaria Federal, S.N.C., Institución de Banca de Desarrollo; Servicios Aeroportuarios de la Ciudad de México, S.A. de C.V.; Federal Electricity Commission; Chairman of the Fondo de Capitalización e Inversión del Sector Rural; Fondo Nacional de Fomento al Turismo; Fideicomiso de Fomento Minero; Fondo de Operación y Financiamiento Bancario a la Vivienda; CNBV; Comisión Nacional de Seguros y Fianzas; Chairman of the Comisión de Cambios; Comisión Nacional de Inversiones Extranjeras; Banco Interamericano de Desarrollo y Corporación Interamericana de Inversiones; Banco Internacional de Reconstrucción y Fomento del Banco Mundial; Organismo Multilateral de Garantía de Inversiones del Banco Mundial; and Banco de Desarrollo del Caribe.	
Mr. Rafael Pacchiano Alamán	Board Member of Petróleos Mexicanos and Secretary of the Environmental and Natural Resources Born: 1975 Business experience: Undersecretary of Environmental Protection Management of the Ministry of Environment and Natural Resources; Youth Program Coordinator of the Transition Team for the President-Elect of Mexico; and Federal Deputy in the LXI Legislature. Other board memberships: Federal Electricity Commission.	2015
Mr. Carlos Elizondo Mayer-Serra	Independent Board Member of Petróleos Mexicanos Born: 1962 Business experience: Professor at the Instituto Tecnológico y de Estudios Superiores de Monterrey, A.C., Santa Fe Campus; Professor-Researcher at the Centro de Investigación y Docencia Económicas, A.C.; and Ambassador of Mexico for the Organización para la Cooperación y Desarrollo Económicos. Other board memberships: Corporación Interamericana de Entretenimiento, S.A.B. de C.V. (Independent) and Consejo Nacional de Ciencia y Tecnología.	2014

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Octavio Francisco Pastrana Pastrana	Independent Board Member of Petróleos Mexicanos Born: 1952 Business experience: Partner of Administradora Ictineo Infraestructura S.A.P.I. de C.V.; President and Chief Executive Officer of Isolux Mexico of Isolux Corsán, S.A.; and Director of Strategy and Business Development of ARB Arendal. Other board memberships: COREMAR Empresa de Servicios Portuarios, S.A.	2014
Mr. Jorge José Borja Navarrete	Independent Board Member of Petróleos Mexicanos Born: 1943 Business experience: Professional Member of the Board of Directors of Petróleos Mexicanos; Member of the Directive Board of the Universidad Nacional Autónoma de México; and Advisor of Grupo Xignux. Other board memberships: Chairman of the Club Universidad Nacional, A.C.	2014
Mr. Alberto Tiburcio Celorio	Independent Board Member of Petróleos Mexicanos Born: 1951 Business experience: Chairman and Chief Executive Officer of Ernst & Young Mexico; Member of Ernst & Young's Americas Executive Board and Global Advisory Committee; and Chairman of the Board of Mexican Financial Reporting Standards. Other board memberships: Grupo Nacional Provincial, S.A.B. de C.V. (Independent); Grupo Palacio de Hierro, S.A.B. de C.V. (Independent); and Afore Profuturo GNP (Independent).	2014
Vacant	Independent Board Member of Petróleos Mexicanos	
Mr. José Antonio González Anaya	Chief Executive Officer/Director General Born: 1967 Business experience: Chief Executive Officer of the Instituto Mexicano del Seguro Social; Undersecretary of Income of the Ministry of Finance and Public Credit; and Chief of Staff of the Secretary of Finance and Public Credit.	2016
Mr. Juan Pablo Newman Aguilar	Chief Financial Officer / Corporate Director of Finance Born: 1979 Business experience: Chief Financial Officer of Nacional Financiera, S.N.C., Institución de Banca de Desarrollo; Deputy Director General of Debt Issuance of the Ministry of Finance and Public Credit; and Director of Risk Management of the Ministry of Finance and Public Credit.	2016

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Isaac García Jiménez	Acting Deputy Director of Budget and Associate Managing Director of Budget (before Deputy Direction of Programming and Budgeting) Born: 1964 Business experience: Director of Support for the Director General's Office of the Banco de Ahorro Nacional y Servicios Financieros, S.N.C., Institución de Banca de Desarrollo; Director of Management and Finance of the Fondo Nacional del Fomento al Turismo; and Deputy Director of Financial Resources of the Fondo Nacional del Fomento al Turismo.	2016
Mr. Rodolfo Campos Villegas	Deputy Director of Treasury Born: 1973 Business experience: Deputy Director of Fiduciary Fund Risk and Financial Strategy of Banco Nacional de Obras y Servicios Públicos, S.N.C., Institución de Banca de Desarrollo; Director of Internal Credit of the Ministry of Finance and Public Credit; and Director of Finance of Canadian Resorts.	2013
Mr. Víctor M. Cámara Peón	Deputy Director of Accounting and Tax Born: 1943 Business experience: Advisor to the Chief Financial Officer of Petróleos Mexicanos; Director of Control and Operational Risk of Banco Nacional de México, S.A.; and Director General of Human Resources of Banco Nacional de México, S.A. Other board memberships: Intermarítima Maya, S.A. de C.V.; Grupo Roche, S.A.; Comercial Salinera de Yucatán, S.A. de C.V.; Infraestructura Maya Peninsular, S.A. de C.V.; and Industria Salinera de Yucatán, S.A. de C.V.	2003
Ms. Alma Rosa Moreno Razo	Deputy Director of Economic Performance (before Deputy Direction of Economic Planning) Born: 1952 Business experience: Advisor to the Director General of Petróleos Mexicanos; Partner of ITG Consultants; and Managing General Director of Grupo Financiero Banorte, S.A.B. de C.V.	2013
Mr. David Ruelas Rodríguez	Deputy Director of Risk Management and Insurance (before Deputy Direction of Risk Management) Born: 1977 Business experience: Associate Managing Director of Corporate Financial Management of Petróleos Mexicanos; Coordinator of Governmental Programs and Strategic Consolidation of Petróleos Mexicanos; and Advisor to the Corporate Director of Management of Petróleos Mexicanos.	2011

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Carlos Alberto Treviño Medina	Corporate Director of Management and Services (before Corporate Direction of Management) Born: 1970 Business experience: Chief Financial Officer of the Instituto Mexicano del Seguro Social; Chief Executive Officer of Financiera Rural; and Undersecretary of Expenses of the Ministry of Finance and Public Credit.	2016
Mr. Marco Antonio Murillo Soberanis	Deputy Director of Labor Relations and Services for Personnel (before Deputy Direction of Human Resources and Labor Relations) Born: 1959 Business experience: Acting Corporate Director of Management of Petróleos Mexicanos; Deputy Director of Human Resources of Petróleos Mexicanos; and Corporate Associate Managing Director of Human Resources of Petróleos Mexicanos.	2005
Mr. Antonio Eduardo Carrillo Liceaga	Deputy Director of Corporate Services Born: 1965 Business experience: Executive Coordinator of Corporate Direction of Management of Petróleos Mexicanos; Advisor of the Corporate Director of Operations of Petróleos Mexicanos; and Associate Managing Director of Public Works Agreements Standardization of Petróleos Mexicanos	2013
Mr. Marco Antonio Navarrete Prida	Deputy Director of Health Services Born: 1967 Business experience: National Coordinator of Assigned Medical Services of Petróleos Mexicanos; Medical Coordinator (Guadalajara Area) of Petróleos Mexicanos; and Medical Supervisor of Petróleos Mexicanos.	2014
Mr. José Antonio Negroe Ortega	Deputy Director of Equity Administration Born: 1957 Business experience: Associate Managing Director of Equity Administration and Services of Pemex-Refining; Independent Professional and Legal Representative of the Museo Tecnológico de la Comisión Federal de Electricidad, A.C.; and General Comptroller of Consorcio Aviaxsa, S.A. de C.V.	2015
Mr. Eduardo León Trauwitz	Deputy Director of Strategic Safeguarding Born: 1966 Business experience: Associate Managing Director of Physical Security Services of Petróleos Mexicanos; Coordinator of Security for Mr. Enrique Peña Nieto; and Coordinator of Assistantships for the Governor of the Estado de México.	2014

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Rodolfo Figueroa Alonso	Corporate Director of Planning, Coordination and Performance Born: 1964 Business experience: Deputy Director of Planning of Pemex-Gas and Basic Petrochemicals; Associate Managing Director of Planning of Pemex-Gas and Basic Petrochemicals; and Associate Managing Director of Assessment and Information of Pemex-Gas and Basic Petrochemicals.	2015
Mr. Julián Castellanos Fernández	Deputy Director of Project Development Born: 1945 Business experience: Associate Managing Director of Specialized Engineering, Quality and Risks of Petróleos Mexicanos; Associate Managing Director of Project Management and Control of Petróleos Mexicanos; and Acting Deputy Director of Project Operations of Petróleos Mexicanos.	2015
Mr. Luis Sergio Guaso Montoya	Deputy Director of Strategic Planning Born: 1963 Business experience: Acting Deputy Director of Management and Finance of Pemex-Exploration and Production; Deputy Director of Business Development of Pemex-Exploration and Production; and Deputy Director of New Models of Execution of Pemex-Exploration and Production.	2015
Mr. Sergio Escoto Cortés	Deputy Director of Programming and Coordination Execution Born: 1967 Business experience: Acting Deputy Director of Operation and Strategy Execution of Petróleos Mexicanos; Associate Managing Director of Evaluation and Monitoring of Petróleos Mexicanos; and Associate Managing Director of Operations Analysis and Programming of Petróleos Mexicanos. Other board memberships: Frío Espacio Control, S.A.P.I. de C.V. (Alternate).	2014
Mr. Luis Fernando Betancourt Sánchez	Deputy Director of Sustainable Development and Safety, Health and Environmental Protection (before Deputy Direction of Operative Discipline, Safety, Health and Environmental Protection) Born: 1967 Business experience: Associate Managing Director of Operative Discipline and Execution of the SSPA System of Petróleos Mexicanos; Associate Managing Director of Environmental Protection of Pemex-Refining; and Associate Managing Director of Implementation of SSPA System of Petróleos Mexicanos.	2010
Mr. Franklin Ulin Jiménez	Deputy Director of Reliability Born: 1957 Business experience: Acting Deputy Director of Maintenance Coordination of Petróleos Mexicanos; Associate Managing Director of Evaluation and Monitoring of Petróleos Mexicanos; and Associate Managing Director of Monitoring and Coordination of Petróleos Mexicanos.	2015

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Jorge Collard de la Rocha	Deputy Director of Business Performance Born: 1951 Business experience: Deputy Director of Management and Finance of Pemex-Petrochemicals; Deputy Director of Management and Finance of Pemex-Exploration and Production; and Acting Deputy Director of Supplies of Petróleos Mexicanos.	2015
Ms. Rosa Elena Torres Ortíz	Deputy Director of Energy Sector Regulation Born: 1971 Business experience: Associate Managing Director of Regulation of Pemex-Gas and Basic Petrochemicals; Director General of Mex Gas Internacional Ltd.; and Associate Managing Director of Planning and Regulation of Pemex-Gas and Basic Petrochemicals.	2015
Mr. José Luis Luna Cárdenas	Chief Information Officer/Corporate Director of Business Processes and Information Technology (before Corporate Direction of Information Technology and Business Processes) Born: 1958 Business experience: Vice President of Business Process Transformation and Operations of Axtel, S.A.B. de C.V.; Senior Vice President of Innovation of Cemex, S.A.B. de C.V.; and Chief Information Officer of Cemex, S.A.B. de C.V.	2013
Mr. Hugo Carlos Berlanga Flores	Deputy Director of Operation and Infrastructure (before Deputy Direction of Technological Infrastructure) Born: 1960 Business experience: Director General of Information Technologies and Communications of the state of Tamaulipas; Executive Director of Enter S.A. de C.V.; and Operations Director of Enter Group.	2013
Mr. Héctor Soto Salgado	Acting Deputy Director of Strategic Alignment and Innovation Born: 1967 Business experience: Associate Managing Director of Strategic Business Relationships and Governance of Petróleos Mexicanos; Independent Consultant; and Senior Consulting Manager of Thrad Consulting.	2016
Mr. Omar Palomino Molina	Deputy Director of Integration of Processes and Solutions (before Deputy Direction of Solutions Integration and Business Processes) Born: 1968 Business experience: Industry Director of Energy of Everis; Associate Managing Director of Procurement Process Improvement of Petróleos Mexicanos; and Associate Managing Director (Northern area) of SAP Mexico & Central America.	2013

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. José Manuel Carrera Panizzo	Corporate Director of Alliances and New Businesses Born: 1969 Business Experience: Chief Executive Officer of PMI; Chief Financial Officer of PMI; and Deputy Director of Risk Management of Petróleos Mexicanos.	2015
Mr. Miguel Ángel Maciel Torres	Deputy Director of Businesses Development of Exploration and Production Born: 1960 Business experience: Deputy Director of Field Development of Pemex-Exploration and Production; Associate Managing Director of Field Development of the Lakach Project of Pemex-Exploration and Production; and Manager of Burgos Integral Project of Pemex-Exploration and Production.	2015
Mr. Armando García Espinosa	Deputy Director of Businesses Development of Industrial Transformation Born: 1967 Business experience: Deputy Director of Management and Finance of Pemex-Refining; Associate Managing Director of Budgets of Pemex-Refining; and Associate Managing Director of Financial Procedure Liaisons of Petróleos Mexicanos.	2015
Mr. Luis Fernández Tovar	Deputy Director of International Analysis Born: 1968 Business experience: Head of the Internal Control Unit of PMI; Local Manager of Tax Auditing of the Servicio de Administración Tributaria; and Central Manager of Tax Coordination of the Federal Entities of the Servicio de Administración Tributaria.	2015
Mr. Jorge Eduardo Kim Villatoro	Legal Director Born: 1979 Business experience: Legal Director of the Instituto Mexicano del Seguro Social; Head of the Legislative Tax Unit of the Ministry of Finance and Public Credit; and Director General of Protection against Administrative Acts of the Procuraduría Fiscal de la Federación.	2016
Mr. Fermín Fernández Guerra Espinal	Deputy Legal Director of Regional Operations (before Deputy Legal Direction of Processes and Project Control) Born: 1976 Business experience: Executive Coordinator of the General Counsel's Office of Petróleos Mexicanos; Associate Managing Director of Equity Regulation of Petróleos Mexicanos; and Deputy Manager of Consulting Services of Petróleos Mexicanos.	2012



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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Alfonso Guati Rojo Sánchez	Deputy Legal Director of Litigious Affairs and Portfolio Management (before Deputy Legal Direction of Litigious Affairs) Born: 1966 Business experience: Partner Founder of Guati Rojo Abogados, S.C., Professor of Universidad Iberoamericana, A.C.; and Professor of Universidad Panamericana, A.C.	2015
Ms. Silvia María Cristina Oropeza Querejeta	Deputy Director of Legal Consultancy Born: 1953 Business experience: Legal Associate Managing Director of Amendments and Agreements of Petróleos Mexicanos; Deputy Manager of Acquisitions, Leases and Service Agreements of Petróleos Mexicanos; and Chief of the Amendments, Agreements and Joint Groups Consulting Unit of Petróleos Mexicanos.	2012
Mr. César Fernández Gómez	Deputy Legal Director of Projects and Businesses Born: 1977 Business experience: Legal Director and Compliance Officer of Petrofac; Legal Director for Latin America and Compliance Officer of Commercial Relations in Mexico and Brazil of Moksha8 Pharmaceuticals; and Senior Associate of Barrera, Siqueiros y Torres Landa, S.C.	2015
Mr. Miguel Ángel Servín Diago	Acting Chief Procurement Officer / Acting Corporate Director of Procurement and Supply and Executive Coordinator of the Corporate Office of Procurement and Supply Born: 1969 Business experience: Head of the Administrative Unit of the Instituto Mexicano del Seguro Social; Director General of Material Resources of the Secretaría de Comunicaciones y Transportes; and Advisor of the Secretary of Communications and Transportation.	2016
Mr. Miguel Ángel Lugo Valdez	Acting Deputy Director of Strategy Management and Business Model Support Born: 1967 Business experience: Acting Associate Managing Director of Contract Planning, Evaluation and Consolidation of Petróleos Mexicanos; Acting Associate Managing Director of Exploration and Production Contracts of Petróleos Mexicanos; and Associate Managing Director of Material Resources of Pemex-Exploration and Production.	2015

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Raúl Mendoza Jiménez	Deputy Director of Development and Suppliers and Contractors Liaisons Born: 1973 Business experience: Vice-president of Business Relationships with Suppliers of PEMEX Procurement International, Inc.; Associate Managing Director of International Trade of Manufactures Supply International; and Associate Managing Director of Implementation and Strategic Planning of Royal Dutch Shell Mexico & Houston.	2014
Mr. Arturo Alfredo Musalem Solís	Acting Deputy Director of Procurement and Supply for Exploration and Production Born: 1959 Business experience: Associate Managing Director of Exploration and Drilling Services Contracts of Petróleos Mexicanos; Acting Associate Managing Director of Supply and Administrative Services (Marine Regions) of Pemex-Exploration and Production; and Deputy Manager of Drilling and Services Supply and Administrative Services of Pemex-Exploration and Production.	2015
Mr. José Luis Antonio Gómez Góngora	Deputy Director of Procurement and Supply for Industrial Transformation Born: 1957 Business experience: Associate Managing Director of Gas and Basic Petrochemicals of Petróleos Mexicanos and Associate Managing Director of Material Resources of Pemex-Gas and Basic Petrochemicals.	2015
Vacant	Deputy Director of Procurement and Supply for Support Services	—
Mr. Tomás Ibarra Guerra	Head of the Institutional Internal Control Unit Born: 1970 Business experience: Head of the Regional Auditing Unit (Northern Zone) of Pemex-Refining; Deputy Director of Surveillance and Procedures of Banco Nacional de Obras y Servicios Públicos S.N.C., Institución de Banca de Desarrollo; and Head of the Internal Control Body of the Lotería Nacional para la Asistencia Pública.	2013
Mr. Efraín Ceballos Medina	Deputy Director of Promotion and Internal Control Development Born: 1973 Business experience: Operative Associate Managing Director of Development and Management Improvement of Petróleos Mexicanos; Head of Auditing of Petróleos Mexicanos; and Head of Auditing of Pemex-Refining.	2015

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<b>Name</b>	<b>Position with Petróleos Mexicanos</b>	<b>Year Appointed</b>
Mr. Daniel Ramírez Ruiz	Head of Internal Auditing Born: 1945 Business experience: Head of the Internal Control Body of Petróleos Mexicanos; Head of the Internal Control Body of Pemex-Exploration and Production; and Administrative Officer of the Sistema Nacional para el Desarrollo Integral de la Familia.	2014
Mr. Carlos Nicolás Juárez Ávila	Deputy Director of Internal Audit Born: 1948 Business experience: Head of Internal Control Body of Pemex-Exploration and Production; Coordinator of Portfolio Audits of the Internal Control Body of the Servicio de Administración y Enajenación de Bienes of the Ministry of Finance and Public Credit; and Director of Delegations Audit of the Internal Control Body of the Attorney General Office.	2013
Mr. Juan Carlos Pérez Tejada López	Deputy Director of Performance and Control Auditing Born: 1958 Business experience: Associate Managing Director of Liaisons with Supervising Areas of Petróleos Mexicanos; Deputy Manager of Programming and Operative Auditing of Petróleos Mexicanos; and Superintendent of Bidding and Contract Quality of Petróleos Mexicanos.	2015
Mr. Carlos Joel Hernández Rodríguez	Deputy Director of Subsidiary Auditing, Information Technology and Legality Born: 1956 Business experience: Head of Internal Audit for the Internal Control Office of Pemex-Gas and Basic Petrochemicals; General Deputy Director of Casas de la Cultura Jurdicia of the Suprema Corte de Justicia de la Nación; and Advisor to the Executive Management Secretariat of the Suprema Corte de Justicia de la Nación.	2015
Mr. Miguel Ángel Hernández Castañeda	Delegate of Internal Auditing in Exploration and Production Born: 1967 Business experience: Head of Audit for Development and Improvement of Public Management of Petróleos Mexicanos; Head of Audit for Development and Improvement of Public Management of Pemex-Exploration and Production; and Head of the Auditing Unit (Central zone) of Pemex-Gas and Basic Petrochemicals.	2015

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<b><u>Name</u></b>	<b><u>Position with Petróleos Mexicanos</u></b>	<b><u>Year Appointed</u></b>
Mr. Luis Alberto Ramos Padilla	Delegate of Internal Auditing in Industrial Transformation Born: 1956 Business experience: Head of the Internal Control Body of Pemex-Refining; Area Director of the Auditoría Superior de la Federación; and Visiting General Supervisor of the CNBV.	2015

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<b>Name</b>	<b>Position with Pemex Exploration and Production</b>	<b>Year Appointed</b>
Mr. José Antonio González Anaya	Chairman of the Board of Pemex Exploration and Production (refer to Petróleos Mexicanos)	2016
Ms. Rosanety Barrios Beltrán	Board Member of Pemex Exploration and Production and Head of the Industrial Transformation Policies of the Ministry of Energy Born: 1963 Business experience: Deputy Director General of Natural Gas Transmission of the Energy Regulatory Commission; Associate Consultant of Sociedad Mexicana de Análisis Financiero; and Assistant Director of Fundamental Analysis of Casa de Bolsa Bancomer, S.A. de C.V., Grupo Financiero BBVA Bancomer. Other board memberships: CENEGAS (Alternate).	2015
Mr. Miguel Messmacher Linartas	Board Member of Pemex Exploration and Production and Undersecretary of Income of the Ministry of Finance and Public Credit Born: 1972 Business experience: Head of the Economic Planning Unit of Public Finance of the Ministry of Finance and Public Credit; Economist of the IMF; and Economic Researcher of Banco de México. Other board memberships: Federal Electricity Commission (Alternate); Lotería Nacional para la Asistencia Pública (Alternate); Pronósticos para la Asistencia Pública (Alternate); Servicio de Administración y Enajenación de Bienes (Alternate); Servicio de Administración Tributaria (Alternate); Comisión de Fomento de las Actividades de las Organizaciones de la Sociedad Civil; Comisión Intersecretarial para la Coordinación Operativa en los Puntos de Internación en Territorio Nacional (Alternate); Comisión Intersecretarial para el Desarrollo de los Bioenergéticos (Alternate); Comisión Intersecretarial de la Industria Automotriz; Comisión de Cambios; CENAGAS; Centro Nacional de Control de Energía; Mexican Petroleum Fund for Stabilization and Development (Alternate); Instituto Nacional para el Federalismo y el Desarrollo Municipal; Comisión de Comercio Exterior; Comisión Tripartita encargada de la Evaluación y Seguimiento de las Disposiciones establecidas en la Ley de Ayuda Alimentaria para los Trabajadores; Comisión Tripartita a que se refiere el artículo 15 de la Ley de Ayuda Alimentaria para los Trabajadores; Comité Interinstitucional para la Aplicación del Estímulo Fiscal a Proyectos de Inversión en la Producción Teatral Nacional; Comité Nacional de Productividad (Alternate); Comité Interinstitucional para la Aplicación del Estímulo Fiscal a Proyectos de Inversión en la Producción Cinematográfica Nacional; and Consejo Nacional de Armonización Contable (Alternate).	2013

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<b>Name</b>	<b>Position with Pemex Exploration and Production</b>	<b>Year Appointed</b>
Mr. Juan Pablo Newman Aguilar	Board Member of Pemex Exploration and Production (refer to Petróleos Mexicanos)	2016
Mr. Jorge Itzal Martínez Herrera	Board Member of Pemex Exploration and Production, Acting Director General of Pemex Industrial Transformation and Deputy Director of Programming, Coordination and Evaluation of Pemex Industrial Transformation Born: 1966 Business experience: Deputy Director of Planning, Coordination and Evaluation of Pemex-Refining; Deputy Director of Operations and Strategy Execution of Petróleos Mexicanos; and Deputy Director of Strategy and Operative Planning of Petróleos Mexicanos.	2016
Mr. Miguel Ángel Servín Diago	Board Member of Pemex Exploration and Production (refer to Petróleos Mexicanos)	2016
Mr. J. Javier Hinojosa Puebla	Board Member of Pemex Exploration and Production, Executive Director of the Management Committee of Pemex Exploration and Production and Director of Development and Production. Born: 1958 Business experience: Chief of Staff of the Director General of Pemex-Exploration and Production; Deputy Director of Field Development of Pemex-Exploration and Production; and Deputy Director of Drilling and Maintenance of Wells of Pemex-Exploration and Production.	2015
Mr. Manuel Terán García	Deputy Director of Production in Deep Waters Born: 1957 Business experience: Manager of Deep Waters Exploration Business Unit (North) of Pemex-Exploration and Production; Manager of the Continental Shelf Exploration Business Unit (South) of Pemex-Exploration; and Operations Coordinator in Exploration of Pemex-Exploration and Production.	2015
Mr. Ricardo Villegas Vázquez	Deputy Director of Production in Shallow Waters Born: 1963 Business experience: Acting Deputy Director of Production (Southwestern Marine region); Associate Managing Director of the Tsimin-Xux Development Project of Pemex-Exploration and Production; and Manager of the Integral Litoral de Tabasco Business Unit of Pemex-Exploration and Production.	2015

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<b>Name</b>	<b>Position with Pemex Exploration and Production</b>	<b>Year Appointed</b>
Mr. Félix Alvarado Arellano	Deputy Director of Onshore Field Production Born: 1963 Business experience: Deputy Director of Production (Northeastern Marine region) of Pemex-Exploration and Production; Manager of the Integral Ku-Maloob-Zaap Business Unit; and Manager of the Integral Abkatún Pol Chuc Business Unit of Pemex-Exploration and Production.	2015
Mr. José Luis Fong Aguilar	Deputy Director of Production in Unconventional Fields Born: 1960 Business experience: Deputy Director of Production (Southern region) of Pemex-Exploration and Production; Deputy Director of Production (Southwestern Marine region) of Pemex-Exploration and Production; and Manager of the Integral Ku-Maloob-Zaap Business Unit (Northeastern Marine region) of Pemex-Exploration and Production.	2015
Mr. Plácido Gerardo Reyes Reza	Deputy Director of Production in Non-Associated Gas Fields Born: 1964 Business experience: Acting Deputy Director of Production, Northern Region of Pemex-Exploration and Production; Acting Manager of the Integral Aceite Terciario del Golfo Business Unit of Pemex-Exploration and Production; and Manager of the Integral Burgos Business Unit of Pemex-Exploration and Production.	2015
Mr. Francisco Javier Flamenco López	Acting Deputy Director of Field Development Born: 1965 Business experience: Associate Managing Director of Deep Waters Projects of Pemex-Exploration and Production; Design Coordinator of Deep Water Projects of Pemex-Exploration and Production; and Project Leader of Complejo Antonio J. Bermudez of Pemex-Exploration and Production.	2016

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<b>Name</b>	<b>Position with Pemex Exploration and Production</b>	<b>Year Appointed</b>
Mr. Eduardo Zavala Nácer	Deputy Director of Sustainable Development, Industrial Safety, Workplace Health and Environmental Protection Born: 1964 Business experience: Deputy Director of Industrial Safety and Environmental Protection Audit of Pemex-Exploration and Production; Associate Managing Director of Industrial Safety and Environmental Protection Auditing of Pemex-Exploration and Production; and Associate Managing Director of Industrial Safety and Environmental Protection Processes of Pemex-Exploration and Production.	2015
Mr. José Guadalupe de la Garza Saldívar	Deputy Director of Reliability Born: 1958 Business experience: Deputy Director of Maintenance and Logistics of Pemex-Exploration and Production; Associate Managing Director of Services for Projects (Southern region) of Pemex-Exploration and Production; and Associate Managing Director of Engineering of Pemex-Exploration and Production.	2015
Mr. Rodrigo Hernández Gómez	Deputy Director of Exploration Services Born: 1961 Business experience: Acting Deputy Director of Project Services of Pemex-Exploration and Production; Associate Managing Director of Services and Projects (Marine regions) of Pemex-Exploration and Production; and Associate Managing Director of Maintenance and Logistics (Northern region) of Pemex-Exploration and Production.	2015
Mr. Primo Luis Velasco Paz	Deputy Director of Operative and Trading Coordination Born: 1959 Business experience: Deputy Director of Distribution and Trading of Pemex-Exploration and Production; Associate Managing Director of Hydrocarbon Transportation and Distribution of Pemex-Exploration and Production; and Associate Managing Director of Operational Technical Coordination (Southwest Marine region) of Pemex-Exploration and Production.	2016
Mr. Luis Ramos Martínez	Deputy Director of Portfolio Management Born: 1957 Business experience: Deputy Director of Planning and Evaluation of Pemex-Exploration and Production; Associate Managing Director of Strategy and Portfolio Evaluation of Pemex-Exploration and Production; and Associate Managing Director of Hydrocarbons Reserves of Pemex-Exploration and Production.	2015



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<b>Name</b>	<b>Position with Pemex Exploration and Production</b>	<b>Year Appointed</b>
Mr. Gustavo Hernández García	Director of Resources, Reserves and Associations (before Operative Coordinator) and Member of Management Committee. Born: 1958 Business experience: Director General of Pemex-Exploration and Production; Deputy Director of Planning and Evaluation of Pemex-Exploration and Production; and Deputy Director (Southwestern Marine region) of Pemex-Exploration and Production	2015
Mr. José Alfonso Rodríguez Torres	Deputy Director of Hydrocarbons Reserves Auditing Born: 1965 Business experience: Associate Managing Director of Resources and Reserves Auditing of Pemex-Exploration and Production; Associate Managing Director of Hydrocarbons Reserves of Pemex-Exploration and Production; and Exploration Design Coordinator of Cantarell Business Unit of Pemex-Exploration and Production.	2015
Mr. José Manuel Reyes Casarreal	Deputy Director of Transfers from Exploration to Development and Production Born: 1963 Business experience: Associate Managing Director of Programming and Evaluation of Operations of Pemex-Exploration and Production; Associate Managing Director of Programming and Evaluation (Northern Region) of Pemex-Exploration and Production; and Associate Managing Director of Programming and Evaluation of Pemex-Exploration and Production.	2015
Vacant	Deputy Director of Alliances Management	—
Mr. José Antonio Escalera Alcocer	Deputy Director of Exploration and Member of the Management Committee of Pemex Exploration and Production Born: 1958 Business experience: Deputy Director of Exploration of Pemex-Exploration and Production; Manager of the Integral Burgos Business Unit (Northern region) of Pemex-Exploration and Production; and Manager of the Integral Poza Rica-Altamira Business Unit (Northern region) of Pemex-Exploration and Production. Other board memberships: Compañía Mexicana de Exploraciones, S.A. de C.V.	2015

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<b>Name</b>	<b>Position with Pemex Exploration and Production</b>	<b>Year Appointed</b>
Mr. Marco Vázquez García	Deputy Director of Geophysics Solutions Born: 1951 Business experience: Associate Managing Director of Geophysical Studies of Pemex-Exploration and Production; Associate Managing Director of Geophysics of Pemex-Exploration and Production; and Associate Managing Director of the National Seismological Processing Center of Pemex-Exploration and Production	2015
Mr. Guillermo Mora Oropeza	Deputy Director of Geosciences and Technical Insurance Born: 1957 Business experience: Associate Managing Director of Regional Studies of Pemex-Exploration and Production; Associate Managing Director of Exploration Technologies of Pemex-Exploration and Production; and Coordinator of Onshore, Shallow Waters and Deep Waters Exploratory Projects of Pemex-Exploration and Production.	2015
Mr. Ulises Hernández Romano	Deputy Director of Portfolio Management and Access to New Areas Born: 1970 Business experience: Associate Managing Director of Reservoir Geology of Pemex-Exploration and Production; Manager of Southeastern Onshore Basins Exploration Business Unit of Pemex-Exploration and Production; and Manager of Deep Waters Studies of Pemex-Exploration and Production.	2015
Mr. José Francisco González Pineda	Deputy Director of Operative Insurance Born: 1959 Business experience: Manager of Exploration Assets in the Southeast Marino Basins of Pemex-Exploration and Production; Coordinator of the Juliva-Comalcalco Project of Pemex-Exploration and Production; and Coordinator of Initial Characterization and Delimitation of the Integral Burgos Business Unit of Pemex-Exploration and Production.	2015

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<b>Name</b>	<b>Position with Pemex Industrial Transformation</b>	<b>Year Appointed</b>
Mr. José Antonio González Anaya	Chairman of the Board of Pemex Industrial Transformation (refer to Petróleos Mexicanos)	2016
Mr. Carlos Alberto Treviño Medina	Board Member of Pemex Industrial Transformation (refer to Petróleos Mexicanos)	2016
Mr. Marco Antonio Cota Valdivia	Board Member of Pemex Industrial Transformation and Director General of Hydrocarbons Exploration and Extraction of the Ministry of Energy Born: 1975 Business experience: Advisor in the Undersecretariat of Hydrocarbons of the Ministry of Energy; Director General of Statistics and Information of the National Hydrocarbon Commission; and Director of Special Projects of the Ministry of Finance and Public Credit.	2015
Mr. Miguel Messmacher Linartas	Board Member of Pemex Industrial Transformation (refer to Pemex Exploration and Production)	2015
Mr. Juan Pablo Newman Aguilar	Board Member of Pemex Industrial Transformation (refer to Petróleos Mexicanos)	2016
Mr. J. Javier Hinojosa Puebla	Board Member of Pemex Industrial Transformation (refer to Pemex Exploration and Production)	2015
Mr. Jorge Itzal Martínez Herrera	Board Member of Pemex Industrial Transformation and Acting Director General (refer to Pemex Exploration and Production)	2016
Mr. Manuel de Jesús Chávez Guerra	Acting Director of Production Born: 1964 Business experience: Deputy Director of Reliability of Pemex Industrial Transformation; Executive Coordinator of the Director General of Pemex-Petrochemicals; and Manager of the Reliability Coordination of Pemex-Gas and Basic Petrochemicals.	2016
Mr. Jorge Humberto Freyre Rizo	Deputy Director of Petroleum Products Production Born: 1959 Business experience: Team Leader of Maintenance of Pemex-Refining; Acting Associate Managing Director of Maintenance of Pemex-Gas and Basic Petrochemicals; and Associate Managing Director of Coatzacoalcos area GPC.	2015

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<b>Name</b>	<b>Position with Pemex Industrial Transformation</b>	<b>Year Appointed</b>
Mr. José Manuel Alvarado Doria	Deputy Director of Gas and Petrochemicals Processes Born: 1957 Business experience: Deputy Director of Production of Pemex-Gas and Basic Petrochemicals; Acting Associate Managing Director of Evaluation and Improvement of Pemex-Gas and Basic Petrochemicals; and Associate Managing Director of Operative Control, Optimization and Safety of Pemex-Gas and Basic Petrochemicals. Other board membership: MGC México, S.A. de C.V.	2015
Mr. Leonardo Cornejo Serrano	Director of Projects Born: 1969 Business experience: Deputy Director of Projects of Pemex-Refining; Coordinator of Modernization and Capacity Expansion Projects of Pemex-Refining; and Associate Managing Director of Capacity Expansion Projects of Pemex-Refining.	2015
Ms. Nabora Morales González	Deputy Director of Engineering and Costs Born: 1954 Business experience: Associate Managing Director of Projects and Construction of Pemex-Gas and Basic Petrochemicals; Project Manager of Pemex-Gas and Basic Petrochemicals; and Deputy Manager of Technical Regulations of Petróleos Mexicanos.	2015
Mr. Oswaldo Romero Mercado	Deputy Director of Industrial Projects Born: 1955 Business experience: Coordinator of Social Impact and High Profitability of Pemex-Refining; Associate Managing Director of Environmental Projects of Pemex-Refining; and Associate Managing Director of Projects of Petróleos Mexicanos.	2015
Mr. Saúl Alonso Hernández Legarreta	Deputy Director of Planning and Control Born: 1970 Business Experience: Acting Deputy Director of Planning of Pemex-Gas and Basic Petrochemicals; Associate Managing Director of Financial Evaluation of Pemex-Gas and Basic Petrochemicals; and Deputy Manager of Evaluation and Financial Planning of Pemex-Gas and Basic Petrochemicals. Other board memberships: Mex Gas Internatiocional, S.L (Chairman); Mex Gas Enterprises, S.L. (Chairman); Mex Gas Supply, S.L. (Chairman); Mex Gas Trading, S.L. (Chairman); Mex Gas Asistencia Integral, S. de R.L. de C.V. (Chairman); MGC México, S.A. de C.V. (Chairman); Mex Gas Industrial Services, B.V.; Pasco International, Ltd.; and TAG Pipelines, S. de R.L. de C.V.	2015

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<b>Name</b>	<b>Position with Pemex Industrial Transformation</b>	<b>Year Appointed</b>
Mr. Juan Marcelo Parizot Murillo	<p>Director of Trading Born: 1966 Business experience: Deputy Director of Liquefied Gas and Basic Petrochemicals of Pemex-Gas and Basic Petrochemicals; Associate Managing Director of Operations of Pemex-Gas and Basic Petrochemicals; and Associate Managing Director of Trading Coordination of Pemex-Refining. Other board memberships: MGI Enterprises, Ltd.; MGI Supply, Ltd.; Mex Gas Trading, Ltd.; Mex Gas Asistencia Integral, S. de R.L. de C.V.; PMX Cogeneración, S.A.P.I. de C.V.; Pasco Terminals, Inc.; MGI Enterprises US, LLC.; TAG Pipelines, S. de R.L. de C.V.; Gasoductos de Chihuahua, S. de R.L. de C.V.; and CH4 Energía, S.A. de C.V.</p>	2015
Mr. Marco Antonio Velasco Monroy	<p>Deputy Director of Fuel Transportation Born: 1964 Business experience: Deputy Director of Trading of Pemex-Refining; Advisor to the Director General of Petróleos Mexicanos; and Undersecretary of Treasury of the Government of the Estado de México.</p>	2015
Mr. René Ramírez Romero	<p>Deputy Director of Products and Industrial Fuels Born: 1966 Business experience: Associate Managing Director of Logistic and Liquefied Petroleum Gas, Basic Petrochemicals and Sulfur of Pemex-Gas and Basic Petrochemicals; Deputy Manager of Natural Gas Regulation and New Business Analysis of Pemex-Gas and Basic Petrochemicals; and Superintendent of Natural Gas Sales for the Automotive and Paper Sector of Pemex-Gas and Basic Petrochemicals. Other Board memberships: Sierrita Gas Pipeline LLC; Pasco International, Ltd.; Tag Pipelines, S. de R.L. de C.V.; MGC México, S.A. de C.V.; Mex Gas Asistencia Integral, S. de R.L. de C.V.; Mex Gas Trading, S.L.; Mex Gas Enterprises, S.L.; Mex Gas Supply, S.L.; Gasaductos de Chihuahua, S. de R.L. de C.V.; and Net Mexico Pipeline Partners, LLC.</p>	2015
Mr. Robertony Tovilla Ruiz	<p>Deputy Director of Sustainable Development, Safety, Health and Environmental Protection Born: 1960 Business experience: Associate Managing Director of Industrial Safety and Environmental Protection Auditing of Pemex-Gas and Basic Petrochemicals; Associate Managing Director of Evaluation and Inspection of Petróleos Mexicanos; and Deputy Manager of Tracking of Petróleos Mexicanos.</p>	2015

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<b>Name</b>	<b>Position with Pemex Industrial Transformation</b>	<b>Year Appointed</b>
Mr. Jorge García de la Cruz	Acting Deputy Director of Reliability Born: 1968 Business experience: Associate Managing Director of Technology Management of Pemex Industrial Transformation; Acting Associate Managing Deputy Director of Operations of Pemex-Petrochemicals; and Technical Manager of Pemex-Petrochemicals.	2016
Mr. Ricardo Martínez Teyssier	Deputy Director of Marketing Born: 1971 Business experience: Associate Managing Director of Business Development and Marketing of Petróleos Mexicanos; Advisor to the Director General of Petróleos Mexicanos; and Advisor to the Deputy Coordinator of International Affairs of the President-Elect's Transition Team.	2015

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<b>Name</b>	<b>Position with Cogeneration and Services</b>	<b>Year Appointed</b>
Mr. José Antonio González Anaya	Chairman of the Board of Pemex Cogeneration and Services (refer to Petróleos Mexicanos)	2016
Mr. Rodolfo Figueroa Alonso	Board Member of Pemex Cogeneration and Services (refer to Petróleos Mexicanos)	2015
Mr. Jorge Itzal Martínez Herrera	Board Member of Pemex Cogeneration and Services (refer to Pemex Exploration and Production)	2016
Mr. Juan Pablo Newman Aguilar	Board Member of Pemex Cogeneration and Services (refer to Petróleos Mexicanos)	2016
Mr. José Manuel Carrera Panizzo	Board Member of Pemex Cogeneration and Services (refer to Petróleos Mexicanos)	2015
Mr. J. Javier Hinojosa Puebla	Board Member of Pemex Cogeneration and Services (refer to Pemex Exploration and Production)	2015
Mr. Tomás Ibarra Guerra	Board Member of Pemex Cogeneration and Services (refer to Petróleos Mexicanos)	2015
Mr. Eleazar Gómez Zapata	Director General Born 1954 Business experience: Commissioner of the Cogeneration Strategy of Petróleos Mexicanos; Deputy Director of Maintenance Coordination of Pemex-Exploration and Production; and Deputy Director of Pipelines Transportation System Coordination of Petróleos Mexicanos. Other board memberships: Corporación Mexicana en Materiales, S.A. de C.V.	2015

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<b>Name</b>	<b>Position with Pemex Drilling and Services</b>	<b>Year Appointed</b>
Mr. José Antonio González Anaya	Chairman of the Board of Pemex Drilling and Services (refer to Petróleos Mexicanos)	2016
Vacant	Board Member of Pemex Drilling and Services and Chief of Staff of the Director General of Petróleos Mexicanos	
Mr. Carlos Alberto Treviño Medina	Board Member of Pemex Drilling and Services (refer to Petróleos Mexicanos)	2016
Mr. José Luis Luna Cárdenas	Board Member of Pemex Drilling and Services (refer to Petróleos Mexicanos)	2015
Mr. J. Javier Hinojosa Puebla	Board Member of Pemex Drilling and Services (refer to Pemex Exploration and Production)	2015
Mr. Miguel Ángel Maciel Torres	Board Member of Pemex Drilling and Services (refer to Petróleos Mexicanos)	2015
Mr. Arturo Alfredo Musalem Solis	Board Member of Pemex Drilling and Services (refer to Petróleos Mexicanos)	2015
Mr. José Refugio Serrano Lozano	Director General of Pemex Drilling and Services Born: 1956 Business experience: Acting Deputy Director of the Drilling Business Unit of Pemex-Exploration and Production; Deputy Director of Project Services of Pemex-Exploration and Production; and Deputy Director of Production (Northeastern Marine region) of Pemex-Exploration and Production.	2015
Mr. Pedro Virgilio Sánchez Soto	Deputy Director of Well Engineering and Business Development Born: 1960 Business experience: Associate Managing Director of Integration and Technical Coordination of Pemex-Exploration and Production; Associate Managing Director of Programming and Evaluation (Southwestern Marine Region) of Pemex-Exploration and Production; and Manager of the Litoral de Tabasco Business Unit of Pemex-Exploration and Production.	2015
Mr. José Gilberto Silva García	Deputy Director for Operations in Wells Interventions Born: 1959 Business experience: Associate Managing Director of Well Services of Pemex-Exploration and Production; Chief of the Northwestern Marine Operative Unit of Pemex-Exploration and Production; and Chief of the Cantarell Operative Unit of Pemex-Exploration and Production.	2015



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<b>Name</b>	<b>Position with Pemex Logistics</b>	<b>Year Appointed</b>
Mr. José Antonio González Anaya	Chairman of the Board of Pemex Logistics (refer to Petróleos Mexicanos)	2016
Mr. Carlos Alberto Treviño Medina	Board Member of Pemex Logistics (refer to Petróleos Mexicanos)	2016
Mr. José Luis Luna Cárdenas	Board Member of Pemex Logistics (refer to Petróleos Mexicanos)	2015
Mr. Luis Sergio Guaso Montoya	Board Member of Pemex Logistics (refer to Petróleos Mexicanos)	2015
Mr. Isaac García Jiménez	Board Member of Pemex Logistics (refer to Petróleos Mexicanos)	2016
Mr. José Luis Antonio Gómez Góngora	Board Member of Pemex Logistics (refer to Petróleos Mexicanos)	2015
Mr. Armando García Espinosa	Board Member of Pemex Logistics (refer to Petróleos Mexicanos)	2015
Mr. Francisco Javier Fuentes Saldaña	Director General Born: 1964 Business experience: Deputy Director of Storage and Allotment of Pemex-Refining; General Coordinator of the Operative Performance Improvement of the National Refining System of Pemex-Refining; and Associate Managing Director of Business Development and Marketing of Pemex-Refining.	2015
Mr. Rodolfo Morado González	Deputy Director of Primary Treatment and Logistics Born: 1963 Business experience: Associate Managing Director of Field Development of Pemex-Exploration and Production; Associate Managing Director of Operations of Pemex-Exploration and Production; and Regional Associate Managing Director of Hydrocarbons Transportation and Distribution of Pemex-Exploration and Production.	2015
Mr. Adrián Brígido Moral Piñeyro	Deputy Director of Storage and Distribution Born: 1963 Business experience: Associate Managing Director of Delivery, Measuring and Services of Pemex-Refining; Acting Associate Managing Director of Station Operation and Maintenance of Pemex-Refining; and Deputy Manager of Station Operations and Maintenance of Pemex-Refining.	2015
Mr. Luis Sánchez Graciano	Deputy Director of Transportation Born: 1966 Business experience: Deputy Director of Pipelines of Pemex-Gas and Basic Petrochemicals; Associate Managing Director of the Measuring System of Pemex-Refining; and Associate Managing Director of Pipeline Transportation of Pemex-Refining. Other board memberships: MGI, Supply, S.L.; MGI, Enterprises, S.L.; MGI, Trading, S.L.; and MGI Asistencia Integral S. de R.L. de C.V.	2015

[Table of Contents](#)**Pemex Logistics—Directors and Executive Officers**

<b>Name</b>	<b>Position with Pemex Logistics</b>	<b>Year Appointed</b>
Mr. Arnulfo Treviño Ramos	Acting Deputy Director of Operations Born: 1963 Business experience: Associate Managing Director of Regional Logistics (Center) of Pemex-Refining; Associate Managing Director of Storage and Allotment (Northern) of Pemex-Refining; and Associate Managing Director of Storage and Allotment (Pacific) of Pemex-Refining.	2016
Mr. Roberto Revilla Ostos	Commercial Deputy Director Born: 1965 Business experience: Associate Managing Director of Policies and Trading Development of Pemex-Refining; Associate Managing Director of Wholesale of Pemex-Refining; and Acting Associate Managing Director of Business Development and Trading of Pemex-Refining.	2015

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<b>Name</b>	<b>Position with Pemex Fertilizers</b>	<b>Year Appointed</b>
Mr. José Antonio González Anaya	Chairman of the Board of Pemex Fertilizers (refer to Petróleos Mexicanos)	2016
Mr. Luis Rodolfo Capitanachi Dagdug	Board Member of Pemex Fertilizers and Associate Managing Director of Accounting for Productive State-Owned Subsidiaries and other Businesses Born: 1971 Business experience: Acting Deputy Director of Management and Finance of Pemex-Petrochemicals; Associate Managing Director of Financial Resources of Pemex-Petrochemicals; and Advisor of the Deputy Director of Management and Finance of Pemex-Petrochemicals.	2015
Mr. Juan Marcelo Parizot Murillo	Board Member of Pemex Fertilizers (refer to Pemex Industrial Transformation)	2015
Mr. Carlos Alberto Treviño Medina	Board Member of Pemex Fertilizers (refer to Petróleos Mexicanos)	2016
Ms. Alma Rosa Moreno Razo	Board Member of Pemex Fertilizers (refer to Petróleos Mexicanos)	2015
Mr. Francisco Javier Fuentes Saldaña	Board Member of Pemex Fertilizers (refer to Pemex Logistics)	2015
Mr. Jorge Collard de la Rocha	Board Member of Pemex Fertilizers (refer to Petróleos Mexicanos)	2015
Mr. Edgar Torres Garrido	Director General Born: 1976 Business experience: Executive Advisor of Petróleos Mexicanos; Director of Economic Analysis and Consulting of Fideicomisos Instituidos en Relación con la Agricultura; and Head of the Risk Management of Financiera Rural.	2015

[Table of Contents](#)**Pemex Ethylene—Directors and Executive Officers**

<b>Name</b>	<b>Position with Pemex Ethylene</b>	<b>Year Appointed</b>
Mr. José Antonio González Anaya	Chairman of the Board of Pemex Ethylene (refer to Petróleos Mexicanos)	2016
Mr. Isaac García Jiménez	Board Member of Pemex Ethylene (refer to Petróleos Mexicanos)	2016
Mr. Jorge Valadez Montoya	Board Member of Pemex Ethylene and Associate Managing Director of Alliances and New Businesses for Conventional Resources of Petróleos Mexicanos Born: 1973 Business experience: Deputy Director of Project Analysis of PMI; Project Manager of Petróleos Mexicanos; and Director of Business Development of Gasoductos de Chihuahua, S. de R.L. de C.V.	2015
Mr. Jorge Collard de la Rocha	Board Member of Pemex Ethylene (refer to Petróleos Mexicanos)	2015
Mr. José Luis Antonio Gómez Góngora	Board Member of Pemex Ethylene (refer to Petróleos Mexicanos)	2015
Mr. Edgar Torres Garrido	Board Member of Pemex Ethylene (refer to Pemex Fertilizers)	2015
Mr. Jorge Itzal Martínez Herrera	Board Member of Pemex Ethylene (refer to Pemex Exploration and Production)	2016
Mr. Ignacio Javier Vergara Castillo	Director General Born: 1964 Business experience: Advisor of the Director General of Petróleos Mexicanos; Managing Director of Accenture; and Senior Manager of Accenture. Other board memberships: Petroquímica Mexicana de Vinilo, S.A. de C.V.; PMV Minera, S.A. de C.V.; and PMV Servicios Administrativos, S.A. de C.V.	2015

The foregoing tables reflect the directors and executive officers of Petróleos Mexicanos and each of the subsidiary entities as of April 11, 2016. Subsequent to this date, on April 27, 2016, the Board of Directors of Petróleos Mexicanos approved the following appointments:

- Mr. J. Javier Hinojosa Puebla as Director General of Pemex Exploration and Production
- Mr. Miguel Ángel Servín Diago as Corporate Director of Procurement and Supply of Petróleos Mexicanos;
- Mr. José Manuel Lotfè Soto as Deputy Director of Procurement and Supply for Support Services of Petróleos Mexicanos;
- Mr. Miguel Ángel Lugo Valdez as Deputy Director of Procurement and Supply for Exploration and Production of Petróleos Mexicanos;

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- Mr. Salvador Nefalí Escobedo Sánchez as Deputy Director of Deputy Director of Strategic Management and Business Model Support of Petróleos Mexicanos;
- Mr. Alejandro Dieck Assad as Deputy Director of Human Resources of Petróleos Mexicanos; and
- Mr. Luis Ignacio Rayón Llerandi, as Deputy Director of Budget of Petróleos Mexicanos.

On May 12, 2016, modifications to the creation resolution of Pemex Exploration and Production were published in the Official Gazette of the Federation, which replaced the Management Committee of Pemex Exploration and Production by a Director General, who will carry out its management, operation and the execution of Pemex Exploration and Production's objectives, subject to the strategies, policies and guidelines approved by its board of directors.

### **Compensation of Directors and Officers**

For the year ended December 31, 2015, the aggregate compensation of executive officers of Petróleos Mexicanos and the existing subsidiary entities (108 persons) paid or accrued in that year for services in all capacities was approximately Ps. 242.1 million. Except in the case of the independent members, with respect to the previous Board of Directors of Petróleos Mexicanos and the boards of directors of the existing subsidiary entities, and the independent members, with respect to the new Board of Directors of Petróleos Mexicanos, the members of our boards of directors do not receive compensation for their services. The compensation paid or accrued during 2015 to the professional members of the previous Board of Directors of Petróleos Mexicanos and boards of directors of the existing subsidiary entities was approximately Ps. 17.9 million. See "Item 7—Major Shareholders and Related Party Transactions—Related Party Transactions" for information about the salary advances that we offer to our executive officers as an employee benefit.

### **Board Practices**

Except in the case of the independent members with respect to the Board of Directors of Petróleos Mexicanos, neither the members of the boards of directors nor the executive officers of Petróleos Mexicanos or the productive state-owned subsidiaries are appointed for a specific term. The length of the terms of the Secretary of Energy and the Secretary of Finance and Public Credit is, however, limited by the length of their respective positions in the Mexican Government. Except in the case of the independent members first appointed under the Petróleos Mexicanos Law, the five independent members of the Board of Directors of Petróleos Mexicanos will be appointed for five-year terms, and may be appointed for an additional term of the same length.

The Mexican Government representatives that serve as members of the boards of directors of Petróleos Mexicanos and each of the existing subsidiary entities may be removed at the discretion of the President of Mexico. The independent members of the Board of Directors of Petróleos Mexicanos may be removed for cause, including failure to carry out the duties and obligations set forth in the Petróleos Mexicanos Law, by the President of Mexico upon Senate approval.

On October 14, 2014, the Board of Directors of Petróleos Mexicanos appointed members to and convened the four committees established by the new Petróleos Mexicanos Law to support its work. Unless otherwise specified in the new Petróleos Mexicanos Law, the memberships of these committees must consist of at least three, but no more than five, members of the Board of Directors of Petróleos Mexicanos. Each of these committees must include two independent members of the Board of Directors of Petróleos Mexicanos, with the exception of the Audit Committee, which must include three independent members. Each of the Secretary of Energy, the Secretary of Finance and Public Credit and any ministry-level secretary serving as a member of the Board of Directors of Petróleos Mexicanos may designate one or more alternates to take his or her place at committee meetings, provided that these alternates are public officials whose positions are not more than two levels below such secretary's position in the Mexican Government.

The committees may authorize a representative of the Director General to attend their meetings as a guest with the right to participate, but not vote, when deemed advisable for the performance of their duties.

### **Audit Committee**

The Audit Committee of the Board of Directors of Petróleos Mexicanos is required to, among other duties, oversee our management, evaluate our financial and operational performance, monitor the status of our internal control systems, as well as nominate our external auditors, whose appointments are approved by the Board of Directors of Petróleos Mexicanos. See "Item 16C—Principal Accountant Fees and Services."

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Each of the three members of the Audit Committee is “independent” of Petróleos Mexicanos within the meaning of Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the Exchange Act). In accordance with the Petróleos Mexicanos Law, the Audit Committee consists of three independent members of the Board of Directors of Petróleos Mexicanos, each of whom will serve as the chair of the committee on a rotating, annual basis, as determined by the Board of Directors of Petróleos Mexicanos.

The Audit Committee consists of the following members:

- Mr. Jorge José Borja Navarrete, independent member of the Board of Directors of Petróleos Mexicanos and Chairperson of the Audit Committee;
- Mr. Octavio Francisco Pastrana Pastrana, independent member of the Board of Directors of Petróleos Mexicanos; and
- Mr. Alberto Tiburcio Celorio, independent member of the Board of Directors of Petróleos Mexicanos.

A representative of the Director General, the Head of the Internal Auditing Area, the Legal Director or any other person may attend the Audit Committee’s meetings as a guest with the right to participate, but not vote, when deemed advisable and appropriate given the subject matter to be discussed.

**Human Resources and Compensation Committee**

The Human Resources and Compensation Committee is chaired by an independent member of the Board of Directors of Petróleos Mexicanos and includes the Secretary of Finance and Public Credit as a permanent member. The duties of the Human Resources and Compensation Committee include, among others, proposing the compensation of the Director General and other members of senior management of Petróleos Mexicanos within three levels of the Director General, as well as proposing hiring policies, performance management guidelines and the compensation of all other employees of Petróleos Mexicanos.

The Human Resources and Compensation Committee of Petróleos Mexicanos consists of the following members:

- Mr. Carlos Elizondo Mayer-Serra, independent member of the Board of Directors of Petróleos Mexicanos and Chairperson of the Human Resources and Compensation Committee;
- Mr. Octavio Francisco Pastrana Pastrana, independent member of the Board of Directors of Petróleos Mexicanos;
- Mr. Luis Videgaray Caso, member of the Board of Directors of Petróleos Mexicanos;
- Mr. Ildefonso Guajardo Villarreal, member of the Board of Directors of Petróleos Mexicanos; and
- Mr. Rafael Pacchiano Alamán, member of the Board of Directors of Petróleos Mexicanos.

**Strategy and Investment Committee**

The Strategy and Investment Committee is chaired by an independent member of the Board of Directors of Petróleos Mexicanos on a rotating annual basis and is required to, among other duties, analyze our business plan and assist the Board of Directors of Petróleos Mexicanos in the approval of guidelines, priorities and general policies related to investments made by Petróleos Mexicanos.

The Strategy and Investment Committee of Petróleos Mexicanos consists of the following members:

- Mr. Jorge José Borja Navarrete, independent member of the Board of Directors of Petróleos Mexicanos and Chairperson of the Strategy and Investment Committee;

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- Mr. Carlos Elizondo Mayer-Serra, independent member of the Board of Directors of Petróleos Mexicanos;
- Mr. Pedro Joaquín Coldwell, member of the Board of Directors of Petróleos Mexicanos;
- Mr. Luis Videgaray Caso, member of the Board of Directors of Petróleos Mexicanos; and
- Mr. Ildefonso Guajardo Villarreal, member of the Board of Directors of Petróleos Mexicanos.

### Acquisitions, Leasing, Public Works and Services Committee

The Acquisitions, Leasing, Public Works and Services Committee is chaired by an independent member of the Board of Directors of Petróleos Mexicanos on a rotating annual basis and, among other duties, reviews, evaluates, monitors and develops recommendations regarding the annual programs of Petróleos Mexicanos for acquisition, construction and services contracts, and determines whether an exception to the public bidding process is applicable in specific cases.

The Acquisitions, Leasing, Public Works and Services Committee of Petróleos Mexicanos consists of the following members:

- Mr. Alberto Tiburcio Celorio, independent member of the Board of Directors of Petróleos Mexicanos and Chairperson of the Acquisitions, Leasing, Public Works and Services Committee;
- Mr. Jorge José Borja Navarrete, independent member of the Board of Directors of Petróleos Mexicanos;
- Mr. Pedro Joaquín Coldwell, member of the Board of Directors of Petróleos Mexicanos;
- Mr. Luis Videgaray Caso, member of the Board of Directors of Petróleos Mexicanos; and
- Mr. Rafael Pacchiano Alamán, member of the Board of Directors of Petróleos Mexicanos.

### Employees

Excluding employees of the PMI Group and including those employed by us on a temporary basis, at December 31, 2015, Petróleos Mexicanos and its productive state-owned subsidiaries had 138,397 employees, as compared to 153,085 at December 31, 2014. During 2015, Petróleos Mexicanos and the productive state-owned subsidiaries employed an average of 15,900 temporary employees.

We present the employee numbers below based on our corporate structure prior to our recent corporate reorganization.

	At December 31,					2015 % of Total
	2011	2012	2013	2014	2015	
Pemex-Exploration and Production	51,713	51,998	53,404	52,403	46,288	33.4%
Pemex-Refining	46,909	46,236	47,980	47,576	43,058	31.0%
Pemex-Petrochemicals	13,541	13,487	13,758	13,476	10,883	7.8%
Pemex-Gas and Basic Petrochemicals	11,918	12,191	12,905	12,669	11,541	8.3%
Petróleos Mexicanos	26,480	26,785	26,727	26,961	26,621	19.2%
Subtotal	<u>150,561</u>	<u>150,697</u>	<u>154,774</u>	<u>153,085</u>	<u>138,397</u>	<u>99.8%</u>
PMI Group	323	325	332	343	339	0.2
<b>Total</b>	<b><u>150,884</u></b>	<b><u>151,022</u></b>	<b><u>155,106</u></b>	<b><u>153,428</u></b>	<b><u>138,736</u></b>	<b><u>100%</u></b>

Source: Petróleos Mexicanos and the PMI Group.

As of December 31, 2015, the Petroleum Workers' Union represented approximately 79.0% of the work force of Petróleos Mexicanos and the productive state-owned subsidiaries. The members of the Petroleum Workers'

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Union are PEMEX employees and they elect their own leadership from among their ranks. Our relationship with our employees is regulated by the *Ley Federal de Trabajo* (which we refer to as the Federal Labor Law), a collective bargaining agreement between Petróleos Mexicanos and the Petroleum Workers' Union and the Employment Regulation for White Collar Employees of PEMEX and Subsidiary Entities. The collective bargaining agreement is subject to renegotiation every two years, although salaries are reviewed annually. Since the Petroleum Workers' Union's was officially established in 1938, we have not experienced labor strikes; we have experienced work stoppages for short periods of time, but none of these stoppages had a material adverse effect on our operations.

On September 10, 2015, Petróleos Mexicanos and the Petroleum Workers' Union executed a new collective bargaining agreement that will regulate their labor relations until July 31, 2017. The new collective bargaining agreement provides for a 3.99% increase in wages and a 1.75% increase in benefits.

On November 11, 2015, Petróleos Mexicanos announced that it had signed an agreement with the Petroleum Workers' Union to modify the pension regime applicable to current and new employees. Pursuant to the agreement, the retirement age for employees with less than 15 years of service has been increased from 55 to 60. Employees are still required to serve for at least 30 years in order to be eligible to receive full retirement benefits. In addition, new employees will receive individual defined contributions retirement plans, which will benefit from direct contributions from Petróleos Mexicanos, portability and tax benefits applicable to retirement savings. Current employees will also be permitted to opt into the new defined contributions retirement plans.

On December 18, 2015, the Director General of Petróleos Mexicanos informed the Ministry of Finance and Public Credit that our pension liabilities were expected to decrease by Ps. 186.5 billion as a result of the modifications to our pension regime described above. As of December 31, 2015, our pension liabilities had decreased by Ps. 196.0 billion.

On December 24, 2015, the Ministry of Finance and Public Credit published in the Official Gazette of the Federation the *Disposiciones de carácter general relativas a la asunción por parte del Gobierno Federal de obligaciones de pago de pensiones y jubilaciones a cargo de Petróleos Mexicanos y sus empresas productivas subsidiarias* (General provisions regarding the assumption by the Federal Government of the payment obligations related to pensions and retirement plans of Petróleos Mexicanos and its productive state-owned subsidiaries). These regulations state the terms, conditions, financing mechanisms and payment arrangements pursuant to which the Ministry of Finance and Public Credit is to assume a portion of the payment obligations related to our pensions and retirement plans. An independent expert will review the calculation, the methodology used, the maturity profile and all of the information provided by us.

In accordance with the Federal Labor Law and collective bargaining agreement in effect as of December 31, 2015, Petróleos Mexicanos and the productive state-owned subsidiaries are under an obligation to pay seniority premiums to retiring employees and pensions to retired employees, as well as death benefits and pensions to certain survivors of retired employees. Retirees are entitled to receive increases in their pensions, of at least the increase in NCPI, whenever salary increases are granted to current employees. We also provide health and medical benefits to employees, retired employees and their beneficiaries and, subject to our overall budgetary constraints, we provide an interest-rate subsidy on employees' mortgage loans.

On November 5, 1997, the Ministry of Finance and Public Credit and the Board of Directors of Petróleos Mexicanos authorized the formation of a trust called the Pemex Labor Fund. This fund is a vehicle to fund labor liabilities, current pension payments and seniority premiums. We have designed a contribution plan to increase the funds held in this trust and to continue to make payments on outstanding labor and pension liabilities. Our contributions to the plan assets for our retirement benefits totaled Ps. 38,041 million in 2014 and Ps. 49,190 million in 2015. As of December 31, 2014 and 2015, the balance of the Pemex Labor Fund was Ps. 2,993 million and Ps. 5,229 million, respectively.



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**Item 7. Major Shareholders and Related Party Transactions****Major Shareholders**

Petróleos Mexicanos and the subsidiary entities have no shareholders because they are public entities of the Mexican Government. The Mexican Government controls us and incorporates the consolidated annual budget and financing program of Petróleos Mexicanos and the subsidiary entities into its budget, which must be approved by the Chamber of Deputies each year. Any adjustment proposed by the Board of Directors of Petróleos Mexicanos to change our annual financial balance goal or increase the limit on our wage and salary expenditures budget or our financing program must be approved by the Chamber of Deputies. See “Item 4—Information on the Company—General Regulatory Framework” for more information about the Mexican Government’s authority with respect to our budget. Our operations in the oil and gas sector are also regulated by the Mexican Government and its ministries.

Mexican Government officials hold five of the ten seats on the Board of Directors of Petróleos Mexicanos, and the Secretary of Energy is the Chairperson of the Board of Directors of Petróleos Mexicanos with the power to cast a tie-breaking vote. An additional five seats on the Board of Directors are held by independent members appointed by the President of Mexico and ratified by the Senate. The Director General of Petróleos Mexicanos is a member of the President of Mexico’s cabinet. See also “Item 3—Key Information—Risk Factors—Risk Factors Related to our Relationship with the Mexican Government.”

**Related Party Transactions**

Article 8, Section XI of the *Ley Federal de Responsabilidades Administrativas de los Servidores Públicos* (Federal Law of Administrative Responsibilities of Public Officials), requires all public officials to “recuse themselves from intervening in any way in the attention to, processing or resolution of matters in which they might have personal, family or business interest, including those where some benefit can result for themselves, their spouse, blood or affinity relatives up to the fourth degree, or civil relatives, or for third parties with which they have professional, labor or business relations, or for partners or partnerships where the public officials or the persons referred above are or have been members thereof.”

The Board of Directors of Petróleos Mexicanos, including the independent members who are not public officials, are subject to the duties of loyalty and diligence. In accordance with the Petróleos Mexicanos Law, an independent member of the Board of Directors of Petróleos Mexicanos may be removed from his or her position for, among other causes: (1) utilizing for personal benefit or for the benefit of any third party the information made available to him or her in connection with the exercise of his or her duties as a board member; (2) disclosing such information in violation of applicable law; or (3) not recusing him or herself from discussion of and voting on matters in respect of which he or she has a conflict of interest. A member of the Board of Directors of Petróleos Mexicanos or of the board of directors of an existing subsidiary entity who acts in contravention of the Petróleos Mexicanos Law may be held liable for any damages that he or she caused to Petróleos Mexicanos or an existing subsidiary entity.

As an employee benefit, we offer salary advances to all of our eligible Petroleum Workers’ Union and non-union workers, including our executive officers, pursuant to the programs set forth in the collective bargaining agreement and in the Employment Regulation of White Collar Employees of Petróleos Mexicanos and Subsidiary Entities, respectively. The salary advances, which are non-interest bearing, are offered to each eligible employee in an amount up to a maximum of four months’ salary and are repaid through salary deductions in equal installments over a period of either one or two years, as elected by the employee. Most of our employees take advantage of this benefit. The largest amount of salary advances outstanding to executive officers at any one time during 2015 was Ps. 25.7 million. As of March 31, 2016, the aggregate amount of salary advances outstanding to our executive officers was Ps. 23.2 million.

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Prior to his appointment as Secretary of Energy, Mr. Pedro Joaquín Coldwell, Chairman of the Board of Directors of Petróleos Mexicanos since December 2012, as well as certain members of his family, held ownership interests in companies that have entered into agreements with Pemex-Refining for the sale and purchase of gasoline and other products by certain retail service stations and a wholesale distributor, as well as the performance of other related activities. As of the date of this report, their ownership interests are as follows:

<b>Company</b>	<b>Name</b>	<b>Ownership Share</b>
Servicio Cozumel, S.A. de C.V. (which operates a retail service station)	Mr. Pedro Joaquín Coldwell	60%
	Mr. Pedro Oscar Joaquín Delbouis (son of Mr. Joaquín Coldwell)	20%
	Mr. Nassim Joaquín Delbouis (son of Mr. Joaquín Coldwell)	20%
Planta de Combustible Cozumel, S.A. de C.V. (which operates as a wholesale distributor)	Mr. Pedro Joaquín Coldwell	40%
	Mr. Fausto Nassim Joaquín Ibarra (father of Mr. Joaquín Coldwell)	60%
	Mr. Pedro Joaquín Coldwell	40%
Gasolinera y Servicios Juárez, S.A. de C.V. (which operates a retail service station)	Mr. Fausto Nassim Joaquín Ibarra	40%
	Mr. Ignacio Nassim Ruiz Joaquín (nephew of Mr. Joaquín Coldwell)	20%
	Mr. Pedro Joaquín Coldwell	20%
Combustibles Caleta, S.A. de C.V. (which operates a retail service station)	Mr. Pedro Oscar Joaquín Delbouis	20%
	Mr. Nassim Joaquín Delbouis	20%
	Mr. Fausto Nassim Joaquín Ibarra	20%
Combustibles San Miguel, S.A. de C.V. (which operates a retail service station)	Mr. Ignacio Nassim Ruiz Joaquín	20%
	Mr. Pedro Joaquín Coldwell	25%
	Mr. Pedro Oscar Joaquín Delbouis	25%
	Mr. Nassim Joaquín Delbouis	25%
	Mr. Ignacio Nassim Ruiz Joaquín	25%

The rights of these companies to operate retail service stations and distribute gasoline and other products on a wholesale basis in Mexico are dependent on these agreements, the expiration or non-renewal of which may adversely affect their business. These agreements are based on our standard forms of agreements and contain the standard terms and conditions applicable to all of Pemex Industrial Transformation retail service stations and wholesale distributors.

## Item 8. Financial Information

### Legal Proceedings

#### *Labor-Related Proceedings*

We are a party to various legal actions involving labor claims of former and present employees. These labor disputes relate to severance payments, life insurance benefits, extensions of labor contracts, level of wages, improper termination and employee housing. We do not expect these lawsuits to have a material adverse effect on our financial condition or future results of operations.

For information on our negotiations with the Petroleum Workers' Union and collective bargaining agreements, see "Item 6—Directors, Senior Management and Employees—Employees" and "Item 4—History and Development—Recent Energy Reform—Pension Liabilities."

#### *Mexican Government Audits and Other Investigations*

Certain rules have been enacted in order to promote a culture of ethics and prevent corruption in our daily operations. On November 11, 2014, the Board of Directors of Petróleos Mexicanos issued the *Código de Ética para Petróleos Mexicanos*, sus

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*empresas productivas subsidiarias y empresas filiales* (Code of Ethics for Petróleos Mexicanos, its productive subsidiary entities and affiliates, or the Code of Ethics), which applies to the members of the boards of directors of Petróleos Mexicanos and each of the subsidiary entities and all of our employees, including the Director General (chief executive officer) of Petróleos Mexicanos, the Chief Financial Officer of Petróleos Mexicanos, the chief accounting officer of Petróleos Mexicanos and all other employees performing similar functions. On February 12, 2015, in accordance with the Code of Ethics, our Ethics Committee was formed, which is responsible for monitoring the implementation and enforcement of the Code of Ethics. See “Item 4—Information on the Company—Business Overview—PEMEX Corporate Matters—Creation of Ethics Committee” for more information. See “Item 16B—Code of Ethics” for more information.

In addition, on February 9, 2015, we adopted the *Código de Conducta de Petróleos Mexicanos, sus empresas productivas subsidiarias y empresas filiales* (Code of Conduct of Petróleos Mexicanos, its productive subsidiary entities and affiliates, or the Code of Conduct). This Code of Conduct delineates the code of conduct expected from all of our employees in the daily performance of their duties and is designed to promote transparency and prevent abuses.

On February 4, 2016, we launched an ethics and corporate integrity program, which incorporates high industry standards and practices related to ethics, integrity, conduct, anti-corruption strategies and institutional values. Additionally, we are developing controls to assess compliance with our ethics and integrity guidelines within PEMEX, and intend to launch an ethics support line and an anti-corruption webpage to inform our partners, contractors and others about our policies and procedures to be applied to our business dealings.

In May 2005, the SFP announced that it had fined several former officers of Petróleos Mexicanos, alleging that these officers had illegally diverted Petróleos Mexicanos’ funds to members of the Petroleum Workers’ Union. In December 2009, the SFP announced that it had fined Mr. Montemayor, the former Director General of Petróleos Mexicanos, for Ps. 1,421.1 million, and banned him from holding public sector positions for 20 years. In April 2010, Mr. Montemayor filed an appeal against this penalty before the *Quinta Sala Regional* (Fifth Regional Court) of the *Tribunal Federal de Justicia Fiscal y Administrativa* (Federal Court of Fiscal and Administrative Justice). On January 24, 2013, a judgment was issued confirming Mr. Montemayor’s ban from holding public sector positions and assigning an economic penalty, but declaring the amount of such penalty null and void.

In March and April 2010, the SFP filed seven criminal complaints against officers and employees of Pemex-Refining, in connection with a pipeline rupture in Nanchital, Veracruz. In August 2013, the Federal Attorney General’s Office notified the SFP that it was closing the investigation related to the criminal complaints against the officers and employees. The SFP filed a motion against this resolution, requesting the performance of additional procedures. As of the date of this report, this motion is still pending. In a concurrent proceeding, the SFP imposed administrative penalties against these officers and employees, as well as against contractors. As of the date of this report, 28 appeals have been filed by these public sector employees, 24 of which have concluded with the following results: 16 penalties were confirmed, six penalties were declared null and void and new resolutions were ordered with respect to two penalties. The contractors filed ten appeals against the administrative penalties, eight of which have concluded with the following results: six penalties were declared null and void and two penalties were confirmed. As of the date of this report, the final resolutions of the two other appeals against the administrative penalties are still pending.

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In May 2010, the SFP filed two criminal complaints and initiated two administrative proceedings against María Karen Miyazaki Hara, who served as PMI's Deputy Director of Trading of Intermediate Distillates, for allegedly committing acts of corruption pursuant to which PMI lost revenues of approximately U.S. \$13 million. The alleged acts involved the unauthorized sale of ULSD for the economic benefit of foreign companies, including Blue Oil Trading Ltd. During November 2010, the first administrative proceedings concluded, resulting in Ms. Miyazaki Hara being fined Ps. 164.2 million and banned from holding public sector positions for 20 years. Ms. Miyazaki Hara filed a motion before the *Séptima Sala Regional Metropolitana* (Seventh Regional Metropolitan Court) of the Federal Court of Fiscal and Administrative Justice seeking that this resolution be declared null and void. On July 2, 2015, the *Segunda Sección de la Sala Superior* (Second Section of the Superior Court) of the Tax and Administrative Federal Court declared the resolution null and void. The SFP filed a motion to review this judgment. As of the date of this report, a final resolution is still pending. In addition, on June 25, 2013, the second administrative proceeding concluded, and the SFP fined Ms. Miyazaki Hara for Ps. 59.3 million and banned her from holding public sector positions for 20 years. On September 23, 2013, Ms. Miyazaki Hara filed a motion against this resolution before the *Octava Sala Regional Metropolitana* (Eighth Regional Metropolitan Court) of the Federal Court of Fiscal and Administrative Justice seeking that this additional resolution also be declared null and void. As of the date of this report, a final resolution is still pending the Superior Court's resolution.

In December 2010, the SFP fined 15 public sector employees for irregularities in a bidding process related to the leasing of four vessels. These employees were barred from holding public sector positions for ten years and several monetary penalties were ordered. The public sector employees filed motions against these penalties. As of the date of this report, 13 of the motions were confirmed. The resolutions in nine motions were declared null and void, in four motions were declared valid and two motions are still pending. Mr. Zermeno Díaz filed an *amparo* against the judgment declaring the resolution valid before the *Décimo Tercer Tribunal Colegiado en Materia Administrativa del Primer Circuito* (Thirteenth Joint Administrative Court of the First Circuit), which, as of the date of this report, is still pending resolution. Mr. Ortiz Ochoa filed an *amparo* against the judgment declaring the resolution valid before the *Tribunal Colegiado del Primer Circuito* (Joint Court of the First Circuit), which was granted and a new judgment is to be issued by the *Primera Sección de la Sala Superior* (First Section of the Superior Court) of the Tax and Administrative Federal Court.

On October 11, 2011, the SFP announced that it had fined three former officers of PMI an aggregate amount of Ps. 267.8 million, for allegedly improper contracting practices in the purchase and/or sale of petroleum products, which allegedly benefited certain of PMI's commercial counterparties. The implicated former officers of PMI were also barred from public sector employment for a period of ten years. These former officers appealed the penalties. Two motions were granted and the resolutions declared null and void. As of the date of this report, a resolution in the remaining motion is still pending before the *Segunda Sala Regional* (Second Regional Court) in Mexico-Hidalgo.

In July 2011, a criminal complaint was filed against Mario Blenda Ahumada, former Deputy Director of Trade and Refined Products of PMI, after a Ps. 11.0 million increase in his personal assets was detected. The Federal Attorney General's Office concluded its investigation without filing a criminal complaint. The SFP filed a motion against this resolution. As of the date of this report, this motion is still pending.

On February 10, 2014, the SFP announced in the Official Gazette of the Federation that it had fined Oceanografía, S.A. de C.V. (or Oceanografía), a Mexican oil-services firm, an aggregate amount of Ps. 24 million and banned it from bidding for and entering into government contracts, including contracts with us, for approximately one year and nine months following nine administrative proceedings initiated by the SFP, which were joined into one. The fine and related ban resulted from the failure of Oceanografía to issue appropriate performance guarantees in connection with certain contracts between Oceanografía and Pemex-Exploration and Production and were published in the Official Gazette of the Federation on February 11, 2014. On March 4, 2014, Oceanografía filed an *amparo* (file No. 211/2014-111) before the *Juzgado Décimo Cuarto de Distrito* (Fourteenth District Court) in Coatzacoalcos, Veracruz against these penalties, which was granted on November 4, 2014. In December 2014 and March 2015, the SFP and the President of Mexico filed motions to review this resolution (file No. A.R.A. 153/2015) before the *Tribunal Colegiado del Décimo Circuito* (Tenth Circuit Joint Court) in Coatzacoalcos, Veracruz, which were denied on June 10, 2015. Accordingly, a new resolution was issued by the SFP stating that the fine and related ban were considered baseless as ordered in the November 4, 2015 judgment.

In a separate proceeding, Oceanografía filed a bankruptcy claim. On July 8, 2014, the *Juez Tercero de Distrito en Materia Civil* (Third District Civil Court) in the Federal District ordered that the penalties against Oceanografía be suspended in an order that was published in the Official Gazette of the Federation on July 30, 2014, which is no longer effective due to the new resolution mentioned above.

The SFP initiated administrative proceeding against several public sector employees in 2014. Four employees of Pemex-Exploration and Production were barred from public sector employment for six months to one year in accordance with a resolution on April 24, 2014. The employees filed motions (files No. 14/8891-19-01-02-OT; 10781/14-17-10-5; 16172/14-17-04-7; and 15972/14-17-11-4) before the Regional Court of Chiapas-Tabasco and the *Décima Sala Regional Metropolitana* (Tenth Regional Metropolitan Court), the *Cuarta Sala Regional Metropolitana* (Fourth Regional Metropolitan Court) and the *Décima Primera Sala Regional Metropolitana* (Eleventh Regional Metropolitan Court) of the Federal Court of Fiscal and Administrative Justice, respectively, requesting that the penalties be declared null and void. As of the date of this report, these motions are still pending resolution, except

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for one case in which a judgment declaring the penalty null and void was issued. On March 19, 2015, the SFP filed a motion to review this resolution (R.F. 196/2015), which was denied on October 16, 2015. Accordingly, on February 26, 2016, a new resolution was issued to restore the employee's rights.

### *Actions Against the Illicit Market in Fuels*

In 2015, because of the security strategy in the facilities of Petróleos Mexicanos, it was clearly the beginning of the lowering of the main factors of growth of illicit fuel market. So we expect:

- Increase the production of hydrocarbons derived from decreased deferred production, which is caused by vandalism activities.
- Reduce product volumes and stolen supplies.
- Strengthen coordination with the authorities of the three branches of government.
- Optimize working together with the Ministries of Defense, of the Navy of Mexico, Attorney General's Office and state governments where the highest incidence happens in this type of crime.
- Protect people and the environment, collateral damage in the illegal abduction.

Given the sophistication and breadth of this network of criminal activity, preventative measures alone have proved insufficient to eliminate the threat of the illicit market in fuels. In response, we have implemented several initiatives with the aim of developing a sustainable operating model to safeguard the areas in which we operate, which comprise approximately 2.0 million square kilometers of onshore fields and 3.2 million square kilometers of Mexican territorial waters. These initiatives are intended to strengthen our ability to combat the illicit market in fuels, and include our U.S. \$282.0 million investment between 2014 and 2016 in the supervisory control and data acquisition (SCADA) measurement system, which is designed to detect any drop in pipeline pressure in order to identify and prevent illegal pipeline taps. These measures form part of our comprehensive approach to reduce the risks described above, with the goal of optimizing our operations and protecting our personnel, facilities, the general population and the environment.

In particular, during 2015, we implemented the following strategic measures in order to decrease incidents of criminal activity at our facilities:

- Maintained vigilance fixed at 10% compared to 2014, in order to mobilize these forces in patrolling areas of crime rate on hydrocarbons.
- Identified 4,907 vehicles involved in the illicit market in fuels, as compared to 3,187 vehicles in 2014, which represents a 54% increase, and decreased the number of individuals brought before judicial authorities in connection with the illicit market in fuels to 1,154, as compared to 1,381 individuals brought before judicial authorities in 2014, which represents a 16.4% decrease. This means that the security strategy is inhibiting the presence of crime.
- Inspected the rights of way and facilities through a total of 10,812,470 kilometers patrolled in 2015, at an average of 29,317 kilometers per day by vehicles and 306 kilometers per day by foot, as compared to 26,588 kilometers per day by vehicles and 593 kilometers per day by foot during 2014. These surveillance activities were carried out in coordination with the *Secretaría de la Defensa Nacional* (Ministry of National Defense), the Mexican Navy and other governmental authorities.
- Strengthened our collaborations with governmental entities, including various state governments in Mexico, the Federal Attorney General's Office, the federal police and the Ministry of the Interior, among others, to share information and provide support to research teams focused on theft and illegal trade in fuels. We have also provided training for authorities responsible for the prevention, detection and prosecution of criminal activities in the illicit market in fuels in an effort to support intragovernmental coordination. During 2015 we filed 7,151 criminal complaints in connection with the illicit fuel market and the illegal tapping of our pipelines, as compared to 5,842 criminal complaints during 2014, which represents a 22.4% increase. These complaints led to the arraignment of 629 individuals in 2015, as compared to 659 individuals arraigned in 2014. We recovered a total of 11.02 million liters of hydrocarbon product in 2015, as compared to 13.09 million liters in 2014.
- We plan to integrate 379 isolation valve facilities into our SCADA measurement system as part of our project involving 47 pipelines. As of the date of this report, we have integrated 203 of these isolation valve facilities and aim to incorporate the remaining 176 isolation valve facilities by November 2016.

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These measures led to the recovery of 20.3 million liters of hydrocarbon product in 2015.

These efforts also led to the identification and sealing of 5,252 illegal pipeline taps in 2015, as compared to the identification and sealing of 3,669 illegal pipeline taps during 2014, which represents a 43% increase. This increase resulted from both increased surveillance and an increase in the number of criminal attempts to divert our products. Our renewed focus on the detection of illegal pipeline taps in 2014 enabled us to collect more information and develop more effective strategies to combat fuel theft, which in turn improved our ability to deploy ground patrol for the immediate identification and sealing of pipeline taps and prevent additional extraction of our hydrocarbons products.

With the aim of strengthening the security of our fuel transportation infrastructure, we announced in February 2015 our test plan to begin transporting only unfinished gasoline and diesel through our pipelines. By transporting fuels at a stage at which they are not yet suitable for use in automotive vehicles and industrial plants, we aim to minimize the incentive to illegally tap our pipelines. The final processing of these fuels is to take place at our storage facilities prior to their delivery for use in automotive vehicles and industrial activities.

On January 12, 2016, the *Ley Federal para Prevenir y Sancionar los Delitos Cometidos en Materia de Hidrocarburos* (Federal Law to Prevent and Punish Crimes related to Hydrocarbons Matters) was published in the Official Gazette of the Federation, along with several reforms to related laws, including the *Código Federal de Procedimientos Penales* (Criminal Procedures Federal Code), the *Código Penal Federal* (Federal Criminal Code) and the *Ley Federal contra la Delincuencia Organizada* (Federal Law of Organized Crime). This new law and the related reforms establish additional civil and criminal penalties for the illegal tapping of pipelines, the theft of hydrocarbons and the alteration of hydrocarbons measurements systems, among other infractions.

On June 7, 2010, Pemex-Exploration and Production filed a civil claim (4:10-cv-01997) before the U.S. District Court for the Southern District of Texas against several companies and individuals seeking damages for the illegal acquisition, possession and sale of petroleum products stolen from Pemex-Exploration and Production facilities in the Burgos basin. This claim was subsequently amended to include additional defendants allegedly involved in the illegal purchase and resale of stolen petroleum products originating in Mexico. During the first half of 2014, the District Court issued a judgment against certain of the defendants and awarded Pemex-Exploration and Production U.S. \$71.0 million in damages. The District Court held that the collection of damages was subject to a two-year statute of limitations with respect to certain of the defendants. On September 29, 2014, Pemex-Exploration and Production filed an appeal before the U.S. Court of Appeals for the Fifth Circuit challenging the application of this statute of limitations, which was denied on March 5, 2015. On March 19, 2015, Pemex-Exploration and Production filed a motion for reconsideration with the Court of Appeals, which was denied.

### *Civil Actions*

In the ordinary course of our business, we are a party to a number of lawsuits of various types. We evaluate the merit of each claim and assess the likely outcome, accruing a contingent liability when an unfavorable decision is probable and the amount is reasonably estimable. At December 31, 2014 and 2015, we had accrued a reserve of Ps. 19.8 billion and Ps. 12.8 billion, respectively, for our contingent liabilities in connection with these lawsuits. Our material legal proceedings are described in Note 25 to our audited financial statements included in this report, and that description is incorporated by reference under this Item.

### **Dividends**

Pursuant to the *Petróleos Mexicanos* Law, as of January 1, 2016, *Petróleos Mexicanos* and its subsidiary entities are subject to a new dividend policy that will require them to pay a state dividend to the Mexican Government on an annual basis. However, the Mexican Government has announced that *Petróleos Mexicanos* will not be required to pay a state dividend in 2016. For more information, see "Item 4—Taxes, Duties and Other Payments to the Mexican Government—Fiscal Regime for PEMEX—Other Payments to the Mexican Government."

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**Item 9. The Offer and Listing**

Trading in the debt securities issued by Petróleos Mexicanos takes place primarily in the over-the-counter market. All the debt securities issued by Petróleos Mexicanos that are registered pursuant to the U.S. Securities Act of 1933 (which we refer to as the Securities Act) are also listed on the Luxembourg Stock Exchange and traded on the Euro MTF market of the Luxembourg Stock Exchange.

**Item 10. Additional Information****Memorandum and Articles of Association**

The Mexican Congress established Petróleos Mexicanos by a decree dated June 7, 1938, effective July 20, 1938. None of Petróleos Mexicanos or the subsidiary entities has bylaws or articles of association. Petróleos Mexicanos and the subsidiary entities, are public entities of the Mexican Government and each is a legal entity empowered to own property and carry on business in its own name.

The activities of Petróleos Mexicanos and the subsidiary entities are regulated by the Mexican Constitution, the Petróleos Mexicanos Law, Regulations to the Petróleos Mexicanos Law, the Hydrocarbons Law and other federal laws and regulations. See “Item 4—Information on the Company—History and Development.” Under the Petróleos Mexicanos Law, the Board of Directors of Petróleos Mexicanos has the following committees: the Audit Committee, the Human Resources and Compensation Committee, the Strategy and Investment Committee and the Acquisitions, Leasing, Public Works and Services Committee. See “Item 6—Directors, Senior Management and Employees.”

Under the Petróleos Mexicanos Law and the Regulations to the Petróleos Mexicanos Law, our directors are obligated to abstain from voting on a proposal, arrangement or contract in which they have a personal, family or business interest. Our directors do not have the power to vote compensation to themselves or any other member of the board. Except in the case of the independent board members, our directors do not receive compensation for their services as members of the boards of directors of Petróleos Mexicanos and the subsidiary entities. Under the Petróleos Mexicanos Law, our directors must perform their duties without obtaining or attempting to obtain any benefits greater than those granted by law. Therefore, our directors do not have borrowing powers exercisable by themselves. There is no requirement for early retirement for our directors.

**Material Contracts**

As of December 31, 2014 and 2015, we have entered into contracts with various contractors for approximate amounts of Ps. 670,870 million and Ps. 991,687 million, respectively. These contracts are for the development of investment projects. See Note 24(f) to our consolidated financial statements included herein.

On January 27, 2009, Petróleos Mexicanos entered into an indenture with Deutsche Bank Trust Company Americas, as Trustee. This agreement provides for the issuance by Petróleos Mexicanos from time to time of unsecured debt securities. On the same date, Petróleos Mexicanos entered into a distribution agreement with Calyon Securities (USA) Inc. (now known as Credit Agricole Securities (USA) Inc.), Citigroup Global Markets Inc., Citigroup Global Markets Limited, HSBC Securities (USA) Inc. and Santander Investment Securities Inc. pursuant to which Petróleos Mexicanos established a U.S. \$7.0 billion medium-term note, Series C, program. Pursuant to the 1996 guaranty agreement referred to above, Petróleos Mexicanos' obligations under all notes issued under this program are jointly and severally guaranteed by Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals. In December 2010, Petróleos Mexicanos appointed Credit Suisse Securities (USA) LLC as an agent under the 2009 distribution agreement referred to above. In each of December 2010 and January 2010, Petróleos Mexicanos increased the size of this program to U.S. \$12.0 billion and U.S. \$22.0 billion, respectively. Petróleos Mexicanos issued U.S. \$3.5 billion of notes and bonds under this program in 2011. In 2012, Petróleos Mexicanos issued U.S. \$5.3 billion of notes and bonds under this program. In 2013, Petróleos Mexicanos increased the size of this program to U.S. \$32.0 billion and issued U.S. \$6.9 billion of notes and bonds under it. In 2014, Petróleos Mexicanos increased the size of this program to U.S. \$42.0 billion and issued U.S. \$7.9 billion of notes and bonds under it. During the first four months of 2015, Petróleos Mexicanos increased the size of this program to U.S. \$52.0 billion and issued U.S. \$8.4 billion of notes and bonds under it. See “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Financing Activities.”



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**Exchange Controls**

Mexico has had a free market for foreign exchange since 1991, and the Mexican Government has allowed the peso to float freely against the U.S. dollar since December 1994. We have no control over or influence on this exchange rate policy. The Mexican Government has announced that it does not intend to change its floating exchange rate policy, but there is no guarantee that the Mexican Government will not change this policy. See “Item 3—Key Information—Exchange Rates.”

**Taxation**

*The 1997 Securities, the 1998 Securities, the 1999 Securities, the 2003 Securities, the 2004 Securities, the 2006 Securities, the 2008 Securities, the 2009 Securities, the 2010 Securities, the 2011 Securities, the 2012 Securities, the 2013 Securities, the 2014 Securities and the 2016 Securities.*

Pursuant to a registration statement on Form F-4 (File No. 333-7796), which was declared effective by the SEC on October 17, 1997, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$400,000,000 of 9.50% Global Guaranteed Bonds due 2027, which we refer to as the 1997 Securities. In December 2004 and February 2006, an aggregate amount of U.S. \$376,250,000 of the 1997 Securities were exchanged for bonds issued by the Pemex Project Funding Master Trust (which we refer to as the Master Trust).

Pursuant to a registration statement on Form F-4 (File No. 333-9310), which was declared effective by the SEC on August 24, 1998, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$350,000,000 of 9 1/4% Global Guaranteed Bonds due 2018, which we refer to as the 1998 Securities. In December 2004 and February 2006, an aggregate amount of U.S. \$340,427,000 of the 1998 Securities were exchanged for bonds issued by the Master Trust.

Pursuant to a registration statement on Form F-4 (File No. 333-10706), which was declared effective by the SEC on October 1, 1999, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$500,000,000 of 9.50% Puttable or Mandatorily Exchangeable Securities (POMES<sup>SM</sup>) due 2027, which we refer to as the 1999 Securities. In December 2004 and February 2006, an aggregate amount of U.S. \$421,522,000 of the 1999 Securities were exchanged for POMES<sup>SM</sup> issued by the Master Trust. All outstanding 1999 Securities of Petróleos Mexicanos were, on March 16, 2006, mandatorily exchanged for 9.50% Global Guaranteed Bonds due 2027 issued by Petróleos Mexicanos, thereby increasing the outstanding amount of the 1997 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-103197), which was declared effective by the SEC on February 24, 2003, the Master Trust, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$500,000,000 of 8.625% Bonds due 2022. Pursuant to a registration statement on Form F-4 (File No. 333-107905), which was declared effective by the SEC on August 21, 2003, the Master Trust, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$510,154,000 of 8.625% Bonds due 2022. We refer to the securities registered in 2003 under these registration statements as the 2003 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-118373), which was declared effective by the SEC on August 31, 2004, the Master Trust, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$47,085,000 of 8.625% Bonds due 2022. We refer to the securities registered in 2004 as the 2004 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-126941), which was declared effective by the SEC on January 13, 2006, the Master Trust, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$324,220,000 of 9 1/4% Bonds due 2018, U.S. \$228,735,000 of 8.625% Bonds due 2023, U.S. \$354,477,000 of 9.50% Bonds due 2027, U.S. \$403,746,000 of POMES<sup>SM</sup> due 2027 and U.S. \$500,000,000 of 6.625% Guaranteed Bonds due 2035. Pursuant to a registration statement on Form F-4 (File No. 333-126948), which was declared



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effective by the SEC on January 13, 2006, the Master Trust, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$25,780,000 of 9 1/4% Bonds due 2018, U.S. \$21,265,000 of 8.625% Bonds due 2023, U.S. \$45,523,000 of 9.50% Bonds due 2027 and U.S. \$96,254,000 of POMES<sup>SM</sup> due 2027. All outstanding POMES registered under these registration statements were, on March 15, 2006, mandatorily exchanged for 9.50% Bonds due 2027. Pursuant to a registration statement on Form F-4 (File No. 333-136674), which was declared effective by the SEC on November 3, 2006, the Master Trust, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$751,995,000 of 6.625% Guaranteed Bonds due 2035. We refer to the securities registered in 2006 under these registration statements as the 2006 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-152486), which was declared effective by the SEC on December 18, 2008, the Master Trust, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$2,500,000,000 of 5.75% Guaranteed Notes due 2018, up to U.S. \$501,000,000 of 6.625% Guaranteed Bonds due 2035 and up to U.S. \$500,000,000 of 6.625% Guaranteed Bonds due 2038. We refer to the securities registered in 2008 as the 2008 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-160799), which was declared effective by the SEC on August 25, 2009, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$2,000,000,000 of 8.00% Notes due 2019. We refer to the securities registered in 2009 as the 2009 Securities.

Effective as of September 30, 2009, Petróleos Mexicanos assumed, as primary obligor, all of the Master Trust's obligations as issuer of the 2001 Securities, the 2003 Securities, the 2004 Securities, the 2006 Securities and the 2008 Securities. As a result, effective as of September 30, 2009, Petróleos Mexicanos is the issuer of all Registered Securities (as defined below).

Pursuant to a registration statement on Form F-4 (File No. 333-168326), which was declared effective by the SEC on August 31, 2010, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$63,314,000 of 8.00% Notes due 2019, up to U.S. \$1,000,000,000 of 6.000% Notes due 2020, up to U.S. \$2,000,000,000 of 5.50% Notes due 2021 and up to U.S. \$1,000,000,000 of 6.625% Bonds due 2035. We refer to the securities registered in 2010 as the 2010 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-175821), which was declared effective by the SEC on August 31, 2011, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$1,000,000,000 of 5.50% Notes due 2021 and up to U.S. \$1,250,000,000 of 6.500% Bonds due 2041. We refer to the securities registered in 2011 as the 2011 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-182553), which was declared effective by the SEC on July 23, 2012, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$2,100,000,000 of 4.875% Notes due 2022 and up to U.S. \$1,750,000,000 of 5.500% Bonds due 2044. We refer to the securities registered in 2012 as the 2012 Securities.

Pursuant to a registration statement on Form F-4/A (File No. 333-189852), which was declared effective by the SEC on July 25, 2013, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$1,000,000,000 of 3.500% Notes due 2018, up to U.S. \$500,000,000 of Floating Rate Notes due 2018, up to U.S. \$2,100,000,000 of 3.500% Notes due 2023, up to U.S. \$1,000,000,000 of 4.875% Notes due 2024, up to U.S. \$500,000,000 of 6.500% Bonds due 2041 and up to U.S. \$1,000,000,000 of 5.50% Bonds due 2044. We refer to the securities registered in 2013 as the 2013 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-198588), which was declared effective by the SEC on September 22, 2014, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex-Refining and

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Pemex-Gas and Basic Petrochemicals registered pursuant to the Securities Act up to U.S. \$500,000,000 of 3.125% Notes due 2019, up to U.S. \$500,000,000 of 4.875% Notes due 2024 and up to U.S. \$3,000,000,000 of 6.375% Bonds due 2045. We refer to the securities registered in 2014 as the 2014 Securities.

Pursuant to a registration statement on Form F-4 (File No. 333-205763), which was declared effective by the SEC on February 22, 2016, Petróleos Mexicanos, Pemex-Exploration and Production, Pemex Industrial Transformation, Permex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services registered pursuant to the Securities Act up to U.S. \$1,500,000,000 of 3.500% Notes due 2020, up to U.S. \$1,000,000,000 of 4.250% Notes due 2025, \$1,500,000,000 of 4.500% Notes due 2026, up to U.S. \$1,500,000,000 of 5.50% Bonds due 2044 and up to U.S. \$3,000,000,000 of 5.625% Bonds due 2046. We refer to the securities registered in 2016 as the 2016 Securities, and together with the 1997 Securities, the 1998 Securities, the 2003 Securities, the 2004 Securities, the 2006 Securities, the 2008 Securities, the 2009 Securities, the 2010 Securities, the 2011 Securities, the 2012 Securities, the 2013 Securities and the 2014 Securities as the Registered Securities.

### *Taxation Generally*

The following summary contains a description of the principal Mexican and U.S. federal income tax consequences of the ownership and disposition of the Registered Securities, but it does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a decision to invest in, or dispose of, the Registered Securities.

This summary is based on the federal tax laws of Mexico and the United States in force on the date of this Form 20-F, including the provisions of the income tax treaty between the United States and Mexico together with related protocols (which are subject to change), and does not describe any tax consequences arising under the laws of any state or municipality in Mexico, the United States or any other jurisdiction, or the laws of any taxing jurisdiction other than the federal laws of Mexico and the United States.

Mexico has also entered into, or is negotiating, tax treaties with various countries that may have effects on holders of Registered Securities. This report does not discuss the consequences (if any) of such treaties.

Each holder or beneficial owner of Registered Securities should consult its tax advisor as to the Mexican, United States or other tax consequences of the ownership and disposition of those securities, including the effect of any foreign, state or municipal tax laws, and the consequences of the application of any tax treaty to which Mexico is a party.

### *Mexican Taxation*

This summary of certain Mexican federal tax considerations refers only to holders of Registered Securities that are not residents of Mexico for Mexican tax purposes and that will not hold the Registered Securities or a beneficial interest therein through a permanent establishment for tax purposes (we refer to any such non-resident holder as a Foreign Holder). For purposes of Mexican taxation, an individual is a resident of Mexico if he/she has established his/her domicile in Mexico. When an individual also has a place of residence in another country, that individual will be considered a resident of Mexico for tax purposes, if such individual has his/her center of vital interest in Mexico. An individual would be deemed to have his/her center of vital interest in Mexico if, among other things: (a) more than 50% of his/her total income for the year were derived from Mexican sources, or (b) his/her principal center of professional activities were located in Mexico.

A legal entity is a resident of Mexico if:

- it maintains the principal administration of its business in Mexico; or
- it has established its effective management in Mexico.

A Mexican national is presumed to be a resident of Mexico unless such person can demonstrate the contrary. If a legal entity or individual has a permanent establishment in Mexico, such permanent establishment shall be required to pay taxes in Mexico on income attributable to such permanent establishment in accordance with Mexican federal tax law.

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***Taxation of Interest.*** Under the Mexican Income Tax Law and rules issued by the Ministry of Finance and Public Credit applicable to PEMEX, payments of interest (which are deemed to include any amounts paid in excess of the original issue price of the relevant securities), made by a Mexican issuer (including Petróleos Mexicanos) in respect of notes or bonds and other debt securities to a Foreign Holder will generally be subject to a Mexican withholding tax assessed at a rate of 4.9%, if the following requirements are met:

- notice relating to the offering of such notes or bonds is given to the CNBV as required under the Securities Market Law and evidence of such notice is timely filed with the Ministry of Finance and Public Credit;
- such notes or bonds are placed outside of Mexico through banks or brokerage houses in a country that is party to a treaty to avoid double taxation with Mexico; and
- the issuer duly complies with the information requirements established in the general rules issued by the Ministry of Finance and Public Credit for such purposes.

If the effective beneficiaries, directly or indirectly, individually or jointly with related parties, receive more than 5% of the interest paid on such notes or bonds and are holders, directly or indirectly, individually or jointly, with related parties of more than 10% of the voting stock of the issuer or entities 20% or more of whose stock is owned directly or indirectly, individually or jointly, by parties related to the issuer, the withholding tax rate applicable to payment of interest on such notes or bonds may be significantly higher.

Payments of interest made by Petróleos Mexicanos or the subsidiary entities, except for Pemex Fertilizers and Pemex Ethylene, in respect of the Registered Securities to non-Mexican pension or retirement funds will be exempt from Mexican withholding taxes, provided that:

- such fund is duly organized pursuant to the laws of its country of origin and is the effective beneficiary of the interest payment;
- the income from such interest payment is exempt from income tax in its country of residence; and
- such fund delivers certain information as per rules issued by the Ministry of Finance and Public Credit.

***Additional Amounts.*** Petróleos Mexicanos and the subsidiary entities, except for Pemex Fertilizers and Pemex Ethylene, have agreed, subject to specified exceptions and limitations, to:

- pay Additional Amounts (as defined in the indenture dated as of September 18, 1997, as supplemented, between Petróleos Mexicanos and Deutsche Bank) to the holders of the 1997 Securities in respect of the Mexican withholding taxes mentioned above;
- pay Additional Amounts (as defined in the indenture dated as of August 7, 1998, as supplemented, between Petróleos Mexicanos and Deutsche Bank) to the holders of the 1998 Securities in respect of the Mexican withholding taxes mentioned above;
- pay Additional Amounts (as defined in the indenture dated as of July 31, 2000, as supplemented, between Petróleos Mexicanos and Deutsche Bank) to the holders of the 2003 Securities and the 2004 Securities in respect of the Mexican withholding taxes described above;
- pay Additional Amounts (as defined in the indenture dated as of December 30, 2004, as supplemented, between Petróleos Mexicanos and Deutsche Bank) to the holders of the 2006 Securities and the 2008 Securities in respect of the Mexican withholding taxes described above; and
- pay Additional Amounts (as defined in the indenture dated as of January 27, 2009, as supplemented, between Petróleos Mexicanos and Deutsche Bank) to the holders of the 2009 Securities, the 2010 Securities, the 2011 Securities, the 2012 Securities, the 2013 Securities, the 2014 Securities and the 2016 Securities in respect of the Mexican withholding taxes described above.

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If Petróleos Mexicanos pays Additional Amounts in respect of such Mexican withholding taxes, any refunds received with respect to such Additional Amounts will be for the account of Petróleos Mexicanos.

Holders or beneficial owners of the Registered Securities may be required to provide certain information or documentation necessary to enable Petróleos Mexicanos and the subsidiary entities to apply the appropriate Mexican withholding tax rate applicable to holders or beneficial owners of the Registered Securities. In the event that the specified information or documentation concerning such holder or beneficial owner, if requested, is not provided on a timely basis, the obligation of Petróleos Mexicanos and the subsidiary entities to pay Additional Amounts may be limited.

*Taxation of Dispositions.* Capital gains resulting from the sale or other disposition of the Registered Securities by a Foreign Holder will not be subject to Mexican income or withholding taxes.

*Other Mexican Tax Considerations.* Under the Income Tax Law, any discount received by a non-resident upon purchase of the notes or bonds from a Mexican resident or a non-resident with a permanent establishment in Mexico is deemed interest income, and therefore, subject to taxes in Mexico. Such interest income results from the difference between the face value (plus accrued interest not subject to withholding) and the purchase price of such notes or bonds.

*Transfer and Other Taxes.* There are no Mexican stamp, registration or similar taxes payable by a Foreign Holder in connection with the purchase, ownership or disposition of the Registered Securities. A Foreign Holder of the Registered Securities will not be liable for Mexican estate, succession, gift, inheritance or similar tax with respect to such securities.

In addition, this summary does not discuss the application of the Medicare contribution tax on net investment income or the alternative minimum tax. Please consult your own tax advisers concerning the U.S. federal, state, local, and other tax consequences of purchasing, owning, and disposing of a Registered Security in your particular circumstances.

*United States Taxation*

This summary of certain U.S. federal income tax considerations deals principally with persons that hold the Registered Securities as capital assets and whose functional currency is the U.S. dollar. As used in this section "Taxation," the term "United States Holder" means an individual who is a citizen or resident of the United States, a U.S. domestic corporation or any other person that is subject to U.S. federal income taxation on a net income basis in respect of its investment in the Registered Securities.

This summary does not purport to be a comprehensive description of all the tax considerations that may be relevant to any particular investor, including tax considerations that arise from rules of general application or that are assumed to be known to investors. This summary generally does not address the tax treatment of holders that may be subject to special tax rules, such as banks, insurance companies, tax-exempt organizations, dealers in securities or currencies, certain short-term holders of Registered Securities, traders in securities electing to mark-to-market, or persons that hedge their exposure in the Registered Securities or hold the Registered Securities as a position in a "straddle" for tax purposes or as part of a "synthetic security" or a "hedging" or "conversion" transaction or other integrated investment comprised of such securities and one or more other investments, nor does it address the tax treatment of holders that did not acquire the Registered Securities at their issue price as part of the initial distribution. Investors who purchased the Registered Securities at a price other than the issue price should consult their tax advisor as to the possible applicability to them of the amortizable bond premium or market discount rules.

*Taxation of Interest and Additional Amounts.* A United States Holder will treat the gross amount of interest and Additional Amounts (*i.e.*, without reduction for Mexican withholding taxes) as ordinary interest income in respect of the Registered Securities. Mexican withholding taxes paid at the appropriate rate applicable to the United States Holder will be treated as foreign income taxes eligible, subject to generally applicable limitations and

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conditions, for credit against such United States Holder's U.S. federal income tax liability, at the election of such United States Holder, or for deduction in computing such United States Holder's taxable income, provided that the United States Holder does not elect to claim a foreign tax credit for any foreign income taxes paid or accrued for the relevant taxable year. Interest and Additional Amounts will constitute income from sources without the United States and generally will be treated separately along with other items of "passive" income for purposes of determining the credit for foreign income taxes allowed under the Internal Revenue Code of 1986, as amended.

The calculation and availability of foreign tax credits or deductions involves the application of rules that depend on a United States Holder's particular circumstances. United States Holders should consult their own tax advisors regarding the availability of foreign tax credits and the treatment of Additional Amounts.

Foreign tax credits may not be allowed for withholding taxes imposed in respect of certain short-term or hedged positions in securities or in respect of arrangements in which a United States Holder's expected economic profits is insubstantial. United States Holders should consult their own advisors concerning the implications of these rules in light of their particular circumstances.

*Taxation of Dispositions.* Upon the sale, exchange or retirement of a Registered Security, a United States Holder will generally recognize a gain or loss equal to the difference between the amount realized (less any amounts attributable to accrued and unpaid interest not previously includible in gross income, which will be taxable as ordinary income) and the holder's tax basis in such security, which is generally equal to the cost of the security to you. Gain or loss recognized by a United States Holder on the sale, redemption or other disposition of the Registered Securities generally will be long-term capital gain or loss if, at the time of disposition, the securities have been held for more than one year. Long-term capital gain realized by an individual United States Holder is generally taxed at lower rates than short-term capital gains or ordinary income.

*Non-United States Holders.* Holders of the Registered Securities that are, with respect to the United States, non-resident aliens or foreign corporations (which we refer to as Non-United States Holders) will not be subject to U.S. federal income taxes, including withholding taxes, on payments of interest on the securities so long as the requirements described under "Backup Withholding and Information Reporting" are satisfied, unless such income is effectively connected with the conduct by the Non-United States Holder of a trade or business in the United States.

The gain realized on any sale or exchange of the Registered Securities by a Non-United States Holder will not be subject to U.S. federal income tax, including withholding tax, unless (1) such gain is effectively connected with the conduct by the holder of a trade or business in the United States or (2) in the case of gain realized by an individual holder, the holder is present in the United States for 183 days or more in the taxable year of the sale and either (A) such gain or income is attributable to an office or other fixed place of business maintained in the United States by such holder or (B) such holder has a tax home in the United States.

A Registered Security held by an individual holder who at the time of death is a non-resident alien will not be subject to U.S. federal estate tax.

*Backup Withholding and Information Reporting.* Information returns may be filed with the Internal Revenue Service with respect to payments made to certain United States Holders of the Registered Securities. In addition, certain United States Holders may be subject to a backup withholding tax in respect of such payments, unless they (1) provide their accurate taxpayer identification numbers to the principal paying agent and certify that they are not subject to backup withholding or (2) otherwise establish an exemption from the backup withholding tax. Backup withholding is not an additional tax. Non-United States Holders may be required to comply with applicable certification procedures to establish that they are not United States Holders in order to avoid the application of such information reporting requirements and backup withholding tax.

## **Documents on Display**

We are subject to the information requirements of the Exchange Act. In accordance with these requirements, we file reports, including annual reports on Form 20-F, and other information with the SEC. These materials, including this report, and the exhibits thereto, may be inspected and copied at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. In addition, any filings we make electronically with the SEC will be available to the public over the Internet at the SEC's web site at <http://www.sec.gov>.

[Table of Contents](#)**Item 11. Quantitative and Qualitative Disclosures About Market Risk****QUALITATIVE DISCLOSURE****Policies for Risk Management and the Use of Derivative Financial Instruments**

We face market risk caused by the volatility of hydrocarbon prices, exchange rates and interest rates, credit risk associated with investments and financial derivatives, as well as liquidity risk. In order to monitor and manage these risks, we have implemented general provisions regarding financial risk management, which are comprised of policies and guidelines that promote an integrated framework for risk management, regulate the use of DFIs and guide the development of risk mitigation strategies.

This regulatory framework establishes that DFIs should generally be used for the purpose of mitigating financial risk. The use of DFIs for any other purpose must be approved in accordance with our current internal regulation by our financial risk committee (the "Financial Risk Committee"). Our Financial Risk Committee is a joint body of Petróleos Mexicanos, the subsidiary entities and certain subsidiary companies that analyzes and makes decisions on financial risk exposure, the financial risk mitigation framework and the negotiation of DFIs.

In addition, the PMI Group has implemented a regulatory framework for risk management with respect to its activities, consisting of policies, guidelines and procedures to manage the market risk associated with its commodity trading activities in accordance with industry best practices, such as the following: the use of DFIs for financial risk mitigation purposes; the segregation of duties; valuation and monitoring mechanisms, such as the generation of a daily portfolio risk report, and value at risk (VaR) computation; and VaR limits, both at a global and business unit level and the implementation of stop loss mechanisms. P.M.I. Trading, Ltd. also has its own risk management subcommittee that supervises the trading of DFIs.

Approved DFIs are mainly traded on the OTC (Over the Counter) market; however, instruments traded on an exchange may also be used. PMI Trading's DFIs are generally traded on CME-Clearport. The different types of DFIs that we have traded are described below, and in Note 16 to our consolidated financial statements included herein, according to their corresponding type of risk and applicable trading markets.

One of our policies is to help minimize the impact that unfavorable changes in financial risk factors have on our financial results by promoting an adequate balance between expected incoming cash flows from operations and outgoing cash flows related to our liabilities.

As part of the regulatory framework for financial risk management, the counterparties that are eligible for trading DFIs and other financial instruments are determined based on minimum credit ratings and credit guidelines established by the Financial Risk Committee, Pemex Industrial Transformation or the Financial Resources Committee.

Since DFIs of Petróleos Mexicanos have been entered into for risk mitigation purposes, particularly with economic hedging purposes, we do not need to establish and monitor market risk limits. For those portfolios with an open market risk exposure, our financial risk management regulatory framework establishes the implementation and monitoring of market risk limits, such as VaR and capital at risk computations (CaR).

We have also established credit guidelines for DFIs offered by Pemex-Gas and Petrochemicals, and now by Pemex Industrial Transformation, to its domestic customers. These credit guidelines require that DFIs negotiated with our domestic customers must be guaranteed by collateral and based on determined credit lines. Although DFIs held by us with our financial counterparties do not require collateral, our regulatory framework requires that we promote credit risk mitigation strategies such as collateral exchange.

We do not have internal policies for DFIs traded on an exchange since we trade under the margin requirements of the corresponding exchange market.

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We do not have an independent third party to verify compliance with these internal standards; however, we have internal control procedures that certify our compliance with existing policies and guidelines.

#### **Description about Valuation Techniques**

##### *Fair Value of DFIs*

We monitor the fair value of our DFI portfolio on a periodic basis. The fair value represents the price at which one party would assume the rights and obligations of the other, and is calculated for DFIs through models commonly used in the international financial markets, based on inputs obtained from major market information systems and price providers.

Our DFI portfolio is composed primarily of swaps, the prices of which are estimated by discounting flows using the appropriate factors, and contains no exotic instruments that require numerical approximations for their valuation.

We value our DFIs under standard methodologies commonly applied in the financial markets, thereby we do not have an independent third party to value our DFIs. Nonetheless, we calculate the fair value of our DFIs through the tools developed by our market information providers such as Bloomberg. We have no policies to designate a calculation or valuation agent.

Because our hedges are cash flow hedges, their effectiveness is preserved regardless of fluctuations in the underlying assets or reference variables, thus asset flows are fully offset by liabilities flows. Therefore, it is not necessary to measure or monitor our hedges' effectiveness.

##### *Fair value hierarchy*

Our fair-value assumptions fall under Level 1 and 2 of the fair value hierarchy for market participant assumptions, as described below.

The fair values determined by Level 1 inputs utilize quoted prices in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs are based on quoted prices for similar assets or liabilities in active markets, and inputs other than quoted prices that are observed for assets or liabilities. Level 3 inputs are unobservable inputs for the assets or liabilities, and include situations where there is little, if any, market activity for the assets or liabilities. Management uses appropriate valuation techniques based on the available inputs to measure the fair values of our applicable assets and liabilities.

When available, we measure fair value using Level 1 inputs, because they generally provide the most reliable evidence of fair value.

#### **Liquidity Sources**

##### *Liquidity Risk*

Our main internal source of liquidity comes from our operations, while our external sources of liquidity include debt issuances and committed revolving credit lines. Through our debt planning and U.S. dollar selling operations, we currently preserve a cash balance at a level of liquidity in domestic currency and U.S. dollars that we consider adequate to cover our investment and operating expenses, as well as other payment obligations, such as those related to DFIs.

In addition, we have acquired committed revolving credit lines in order to mitigate liquidity risk, two of which provide access to Ps. 3,500 million and Ps. 20,000 million with expiration dates in June and November 2019, respectively, and two others that provide access to U.S. \$1,250 million and U.S. \$3,250 million with expiration dates in December 2016 and January 2020, respectively.

Finally, the investment strategies of our portfolios are structured by selecting time horizons that consider each currency's cash flow requirements in order to preserve liquidity.

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The PMI Group mitigates the liquidity risk within its companies through several mechanisms, the most important of which is the centralized treasury or “*in-house bank*,” which provides access to a syndicated credit line for up to U.S. \$700 million and cash surplus capacity in the custody of the centralized structure. In addition, the companies in the PMI Group have access to bilateral credit lines from financial institutions for up to U.S. \$850 million.

The companies in the PMI Group monitor their cash flow on a daily basis and protect their creditworthiness in the financial markets. Liquidity risk is mitigated by monitoring the maximum/minimum permissible financial ratios as set forth in the policies approved by each company’s board of directors.

### **Changes in Exposure to Main Risks**

#### *Market Risk*

##### **(i) Interest Rate Risk**

We are exposed to fluctuations in floating interest rate liabilities. We are exposed to U.S. dollar LIBOR and to Mexican peso TIIE. As of December 31, 2015, approximately 25.8% of our total net debt outstanding consisted of floating rate debt.

Moreover, we invest in pesos and U.S. dollars in compliance with applicable internal regulations, through portfolios that have different purposes that seek an adequate return subject to risk parameters that reduce the probability of capital losses. The objective of the investments made through these portfolios is to meet our obligations payable in pesos and U.S. dollars.

The investments made through our portfolios are exposed to domestic and international interest rate risk and credit spread risk derived from government and corporate securities, and inflation risk arising from the relationship between UDIs and pesos. However, these risks are mitigated by established limits on exposure to market risk.

#### Interest Rate Swaps

Occasionally, for strategic reasons or in order to offset the expected inflows and outflows, we have entered into interest rate swaps. Under our interest rate swap agreements, we acquire the obligation to make payments based on a fixed interest rate and are entitled to receive floating interest rate payments based on LIBOR, TIIE or a rate referenced to or calculated from TIIE.

As of December 31, 2015, we were a party to four interest rate swap agreements denominated in U.S. dollars for an aggregate notional amount of U.S. \$2,225 million at a weighted average fixed interest rate of 2.35% and a weighted average term of 9.20 years.

Similarly, in order to eliminate the volatility associated with variable interest rates of long-term financing operations, PMI NASA has executed interest rate swap agreements denominated in U.S. dollars for an outstanding aggregate notional amount of U.S. \$115.1 million, at a weighted average fixed interest rate of 4.16% and a weighted average term of 5.73 years.

##### **(ii) Exchange Rate Risk**

A significant amount of our revenues is derived from exports of crude oil and petroleum products, which are priced and payable in U.S. dollars. Moreover, our revenues from domestic sales of gasoline and diesel net of IEPS tax, duties, incentives, and other related taxes, petrochemicals and natural gas and our byproducts are related to international U.S. dollar-denominated prices, except for domestic sales of LPG, which are priced in pesos and represent less than 5% of our revenues.

Our expenses related to hydrocarbon duties are calculated based on international U.S. dollar-denominated prices, and the cost of hydrocarbon imports that we acquire for resale in Mexico or use in our facilities are indexed to international U.S. dollar-denominated prices. By contrast, our capital expenditures and operating expenses are determined and set forth in our budget in pesos.



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As a result of this cash flow structure, the depreciation of the peso relative to the U.S. dollar increases our financial balance. The appreciation of the peso relative to the U.S. dollar has the opposite effect. We manage this risk without the need for hedging instruments, because the impact on our revenues of fluctuations in the exchange rate between the U.S. dollar and the peso is offset in whole or in part by its impact on our obligations.

### Cross-Currency Swaps

Most of our debt is denominated in U.S. dollars or pesos. Although we seek to issue debt either in U.S. dollars or pesos, this is not always achievable. As a consequence of the cash flow structure described above, fluctuations in non-U.S. dollar currencies (other than pesos) may increase our cost of funding due to the exposure to foreign exchange risk.

Since 1991, for non-U.S. dollar or peso issuances we have, as a risk mitigation strategy, used DFIs to swap this debt into U.S. dollars. In order to hedge inflation risk associated with debt denominated in UDIs, we swap this debt into pesos, depending on market conditions. As a result of this strategy, we hold a debt portfolio with negligible sensitivity to currency risk other than pesos and U.S. dollars.

The underlying currencies of our DFIs are the euro, Swiss franc, Japanese yen, pound sterling and Australian dollar, which are each swapped against the U.S. dollar and UDIs which are swapped against the peso.

In 2015, we entered into various cross-currency swaps to hedge currency risk arising from debt obligations denominated in euros and Swiss francs, for an aggregate notional amount of U.S. \$3,109.3 million, and the inflation risk arising from debt denominated in UDIs, for an aggregate notional amount of Ps. 9,706.93 million. During 2014, we entered into the same type of instruments to hedge currency risk arising from debt obligations denominated in euros, for an aggregate notional amount of U.S. \$1,388.4 million.

Most of our cross-currency swaps are plain vanilla except for one swap entered into in 2004 to hedge our exposure to euros, with a termination date on August 5, 2016. This swap is referred to as an “extinguishing swap” and was obtained in order to hedge long-term obligations. The main characteristic of extinguishing swaps is that these DFIs terminate upon the occurrence of any of the credit default events specified in the DFI contract confirmation, without any payment obligation by either party. This swap has a notional amount of U.S. \$1,146.4 million.

We recorded a total net foreign exchange loss of Ps. 154,765.6 million in 2015, as compared to a total net foreign exchange loss of Ps. 76,999.2 million in 2014 and to a total net foreign exchange loss of Ps. 3,951.5 million in 2013, which includes the unrealized foreign exchange loss (mostly associated with debt) of Ps. 152,676.3 million, Ps. 78,884.7 million and Ps. 3,308.3 million for the years ended December 31, 2015, 2014 and 2013, respectively. The depreciation of the peso caused a total net foreign exchange loss in 2015 because a significant portion of our debt (77.9% as of December 31, 2015) is denominated in foreign currency. Unrealized foreign exchange losses and gains do not impact our cash flows. Due to the cash flow structure described above, the depreciation of the peso relative to the U.S. dollar does not affect our ability to meet U.S. dollar-denominated financial obligations and it improves our ability to meet peso-denominated financial obligations. On the other hand, the appreciation of the peso relative to the U.S. dollar may increase our peso-denominated debt service costs on a U.S. dollar basis. Our foreign exchange loss in 2015 was due to the depreciation of the peso, from Ps. 14.7180 = U.S. \$1.00 on December 31, 2014 to Ps. 17.20650 = U.S. \$1.00 on December 31, 2015. Our foreign exchange loss in 2014 was due to the depreciation of the peso, from Ps. 13.0765 = U.S. \$1.00 on December 31, 2013 to Ps. 14.7180 = U.S. \$1.00 on December 31, 2014. Our foreign exchange loss in 2013 was due to the depreciation of the peso, from Ps. 13.0101 = U.S. \$1.00 on December 31, 2012 to Ps. 13.0765 = U.S. \$1.00 on December 31, 2013.

The PMI Group also faces market risks generated by fluctuations in foreign exchange rates. In order to mitigate these risks, the boards of directors of several of the companies that form the PMI Group have authorized a policy which stipulates that no more than 5% of a company's total financial assets may be denominated in a currency other than its functional currency, unless the company owes a duty or expected payment in a currency other than its functional one. Accordingly, the companies in the PMI Group will from time to time enter into DFIs in order to mitigate the risk associated with financing operations denominated in currencies other than a company's functional currency.

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Finally, a significant amount of PMI Trading's income and expenses, including the cost of sales and related sales costs, is derived from the trade of refined products, petrochemicals and gas liquids to our subsidiaries and third parties, whose prices are determined and are payable in U.S. dollars. PMI Trading's exposure to foreign currency risk results primarily from the need to fund tax payments denominated in domestic currency and secondarily from the need to purchase products in domestic currency for sale in U.S. dollars in the international market, as well as certain related sales costs denominated in domestic currency.

PMI Trading believes it can adequately manage the risk created by the payment of taxes in domestic currency without the need to enter into hedging instruments because the exposure to this risk is marginal relative to the total flows of U.S. dollar. In addition, in the event that a potential foreign exchange risk arises in connection with a commercial transaction, PMI Trading may implement risk mitigation measures by entering into DFIs.

**(iii) Hydrocarbon Price Risk**

We periodically assess our revenues and expenditures structure in order to identify the main market risk factors that our cash flows are exposed to in connection with international hydrocarbon prices. Based on this assessment, we monitor our exposure to the most significant risk factors and quantify their impact on our financial balance.

We continuously evaluate the implementation of financial risk mitigation strategies, including those involving the use of DFIs, while taking into account operational and economic constraints.

Commodity Derivatives

Pemex Industrial Transformation's domestic sales of LPG have been subject to a price control mechanism imposed by the Mexican Government. This mechanism generates a risk exposure in the geographic areas where we sell imported LPG.

In 2015, we entered into various swaps in order to hedge the risk arising from fluctuation in the propane import price. These DFIs were held over a percentage of the total volume of imported LPG, with maturity dates ranging from March 31, 2015 to December 31, 2015. The transactions that matured on December 31, 2015, were settled in January 2016. Although we entered into these contracts with economic hedging purposes, for accounting purposes, these DFIs do not qualify as hedges and were recorded as trading instruments in the financial statements.

In addition to supplying natural gas, Pemex Industrial Transformation, and previously Pemex-Gas and Basic Petrochemicals, offers DFIs to its domestic customers in order to provide them with support to mitigate the risk associated with the volatility of natural gas prices. Pemex Industrial Transformation enters into DFIs with Mex Gas Supply, S.L. under the opposite position to those DFIs offered to its customers in order to mitigate the market risk it bears under such offered DFIs. Mex Gas Supply, S.L. then transfers the related price risk derived from the DFI position held with Pemex Industrial Transformation to international financial counterparties by entering into these opposite position DFIs with such parties. Through the above mechanism, Pemex Industrial Transformation maintains a negligible or even null exposure to market risk. These portfolios have VaR and CaR limits in order to bound market risk exposure.

PMI Trading faces market risk generated by the terms of the purchase and sale of refined products and natural gas liquids, as well as the volatility of oil prices. Accordingly, it frequently enters into DFIs in order to mitigate this risk, thereby reducing the volatility of its financial results.

In accordance with the risk management regulatory framework that PMI Trading has implemented, VaR and the change in profit and loss by portfolio are calculated daily and compared to the maximum applicable limits in order to implement risk mitigation mechanisms as necessary.

**(iv) Risks Related to the Portfolio of Third-Party Shares**

As of December 31, 2015 Petróleos Mexicanos does not hold any third-party shares and, therefore does not hold any DFI related to such shares. On May 2014, we held a synthetic long position on 67,969,767 shares of Repsol, with the objective of maintaining corporate and economic rights over these shares. We accomplished this objective by using a total return swap under

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which we paid variable amounts and received a total return on the Repsol shares. Under these DFI's, we were entitled to any capital gains associated with the Repsol shares and agreed to cover our counterparties for any capital losses relating to those shares in reference to an exercise price, as well as to make payments at a floating interest rate. On June 3, 2014, we made an early termination of this total return swap. Following this termination, Petróleos Mexicanos no longer directly participates in Repsol.

As of December 31, 2015, PMI HBV owned 20,724,331 Repsol shares and P.M.I. Holdings Petróleos España, S.L. holds one Repsol share for a total of 20,724,332 shares. These Repsol shares have no related DFI.

### **Counterparty or Credit Risk**

When the fair value of a DFI is favorable to us, we face the risk that the counterparty will not be able to meet its obligations. We monitor our counterparties' creditworthiness and calculate the credit risk exposure for our DFI's. As a risk mitigation strategy, we only enter into DFI's with major financial institutions with a minimum credit rating of BBB-. These ratings are issued and revised periodically by risk rating agencies. Furthermore, we seek to maintain a diversified portfolio of counterparties.

In order to estimate the credit risk exposure to each financial counterparty, we calculate the potential future risk exposure by projecting the risk factors used in the valuation of each DFI to estimate the mark-to-market (MtM) value for different periods, taking into account any credit risk mitigation provisions.

Moreover, we have entered into various long-term cross-currency swaps agreements with "recouping" provisions (pursuant to which the payments on the swaps are adjusted when the MtM exceeds the relevant threshold specified in the swap), thereby limiting our exposure with our counterparties to a specific threshold amount. The specified thresholds were reached in nine cross-currency swaps from the first to the fourth quarter of 2015, which were used to hedge the exchange rate exposure to the euro and to the Australian dollar, and in three cross-currency swaps during 2014, which were used to hedge the exchange rate exposure to the euro and the pound sterling. This resulted in the cash settlement of such swaps and the resetting of swap terms to return their mark-to-market value to zero. In addition, during 2015, we entered into one cross-currency swap in euros with these characteristics.

According to IFRS 13, "Fair Value Measurement," the fair value or mark-to-market value of DFI's must reflect the creditworthiness of the parties. Consequently, the fair value of a DFI takes into account the risk that either party may default on its obligation. In accordance with market best practices, we apply the credit value adjustment (CVA) method to calculate the fair value of our DFI's.

For each DFI, the CVA is calculated by determining the difference between the MtM and the estimated MtM adjusted for credit risk. In determining the credit risk, the CVA method takes into account the current market perception about the credit risk of both counterparties, using the following inputs: (a) the MtM projection for each payment date based on forward yield curves; (b) the implied default probability obtained from the credit default swaps of both us and the counterparty at each payment date; and (c) the default recovery rates of each counterparty.

Furthermore, by means of its credit guidelines for DFI operations Pemex Industrial Transformation has significantly reduced its credit risk exposure related to the DFI's offered to its customers to assist them in mitigating the risk associated with the volatility of natural gas prices. In order to qualify for these DFI's, Pemex Industrial Transformation customers must be party to a current natural gas supply contract and sign a domestic master derivative agreement.

Additionally, beginning on October 2, 2009, DFI's with these customers must be initially secured by cash deposits, letters of credit or other collateral provisions, as required. In accordance with these guidelines, in the event that a client does not meet its payment obligations, DFI's related to this client are terminated, exercising the rights collateral and, if the collateral is insufficient to cover the fair value, natural gas supply is suspended until the payment is made.

On August 20, 2014, certain amendments to the credit guidelines were enacted. These amendments allowed Pemex-Gas and Petrochemicals, and now Pemex Industrial Transformation, to offer to its clients with an adequate credit rating, based on an internal financial and credit assessment, DFI's with an exemption from collateral requirements up to certain amount through a credit line approved by the credit committee. Moreover, if the credit line is insufficient to cover each client's exposure, the client is obligated to

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deposit collateral. If a client suffers an event of default, DFIs related to this client are terminated early and natural gas supply is suspended until the payment is made.

PMI Trading's credit risk associated with DFI transactions is mitigated through the use of futures and standardized instruments that are cleared through CME-Clearport.

#### Accounting Standards Applied and the Impact on Results

We enter into derivatives transactions with the sole purpose of hedging financial risks related to our operations, firm commitments, planned transactions and assets and liabilities recorded on our statement of financial position. Nonetheless, some of these transactions do not qualify for hedge accounting treatment because they do not meet the requirements of IAS 39, "Financial Instruments Recognition and Measurement" ("IAS 39") for being designated as hedges. They are therefore recorded in the financial statements as non-hedge instruments or as instruments entered into for trading purposes, despite the fact that their cash flows are offset by the cash flows of the positions to which they are related. As a result, the changes in their fair value are recognized in the "Derivative financial instruments (cost) income—net" line item in the consolidated statement of comprehensive income.

As of December 31, 2015 and 2014, the net fair value of our DFIs was Ps. (25,699.6) million and Ps. (15,897.2) million, respectively. As of December 31, 2015 and 2014, we did not have any DFIs designated as hedges. See Note 16 to our consolidated financial statements.

For the years ended December 31, 2015, 2014 and 2013, we recognized a net gain (loss) of Ps. (21,449.9) million, Ps. (9,438.6) million and Ps. 1,311.0 million, respectively, in the "Derivative financial instruments (cost) income, net" line item with respect to DFIs treated as instruments entered into for trading purposes.

According to established accounting policies, we have analyzed the different contracts we have entered into and have determined that according to the terms thereof none of these agreements meet the criteria to be classified as embedded derivatives. Accordingly, as of December 31, 2015 and 2014, we did not recognize any embedded derivatives (foreign currency or index).

### QUANTITATIVE DISCLOSURE

#### Fair Value

The following tables show our cash flow maturities as well as the fair value of our debt and DFI portfolios as of December 31, 2015. It should be noted that:

- for debt obligations, these tables present principal cash flow and related weighted average interest rates for fixed rate debt;
- for interest rate and cross-currency swaps, these tables present notional amounts and weighted average interest rates by expected (contractual) maturity dates;
- weighted average variable rates are based on implied forward rates obtained from the interbank market yield curve at the reporting date;
- for natural gas DFIs, volumes are presented in millions of British thermal units (MMBtu), and average fixed and strike prices are presented in U.S. dollars per MMBtu;
- a DFI's fair value includes CVA and is calculated based on market quotes obtained from market sources such as Reuters and Bloomberg. Forward curves for natural and propane gas are supplied by the KiodeX Risk Workbench platform;
- for PMI Trading, prices used in commercial transactions and DFIs are published by reputable sources that are widely used in international markets, such as CME-NYMEX, Platts and Argus, among others;
- fair value is calculated internally, by discounting cash flows with the corresponding zero coupon yield curve in the original currency; and
- for all instruments, the tables are based on the contract terms in order to determine the future cash flows that are categorized by expected maturity dates.

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This information is presented in thousands of pesos (except as noted).

**Quantitative Disclosure of Debt Cash Flow's Maturities as of December 31, 2015<sup>(1)</sup>**

	Year of expected maturity date						Total carrying value	Fair value
	2016	2017	2018	2019	2020	Thereafter		
<b>Liabilities</b>								
Outstanding debt								
Fixed rate (U.S. dollars)	Ps. 12,829,312	Ps. 11,855,937	Ps. 82,984,743	Ps. 52,181,092	Ps. 50,502,077	Ps. 528,285,394	Ps. 738,638,554	Ps. 693,943,114
Average interest rate (%)							5.3598%	
Fixed rate (Japanese yen)	834,293	417,133	—	—	—	4,287,000	5,538,426	5,606,358
Average interest rate (%)							3.1698%	
Fixed rate (Pounds)	—	—	—	—	—	8,885,952	8,885,952	10,767,887
Average interest rate (%)							8.2500%	
Fixed rate (pesos)	7,500,000	—	—	—	10,064,778	110,946,135	128,510,914	176,496,022
Average interest rate (%)							7.5851%	
Fixed rate (UDIs)	—	—	—	16,754,153	4,318,678	30,892,053	51,964,883	44,959,784
Average interest rate (%)							5.3275%	
Fixed rate (euros)	15,987,190	22,513,392	—	—	24,308,184	81,184,552	143,993,317	136,416,000
Average interest rate (%)							4.0517%	
Fixed rate (Swiss Francs)	—	—	—	5,200,092	10,391,550	—	15,591,642	15,342,323
Average interest rate (%)							1.8335%	
Fixed rate (Australian dollars)	—	1,879,733	—	—	—	—	1,879,733	1,998,003
Average interest rate (%)							6.1250%	—
<b>Total fixed rate debt</b>	<u>37,150,795</u>	<u>36,666,195</u>	<u>82,984,743</u>	<u>74,135,337</u>	<u>99,585,266</u>	<u>764,481,085</u>	<u>1,095,003,422</u>	<u>1,085,529,491</u>
Variable rate (U.S. dollars)	98,054,813	26,444,912	21,175,683	10,682,902	42,961,127	17,834,819	217,154,256	211,799,779
Variable rate (Japanese yen)	—	—	—	—	9,145,600	—	9,145,600	8,446,427
Variable rate (euros)	—	—	—	—	—	—	—	—
Variable rate (pesos)	38,814,538	29,895,944	8,619,552	22,902,913	18,211,267	35,145,822	153,590,036	152,252,128
<b>Total variable rate debt</b>	<u>136,869,351</u>	<u>56,340,855</u>	<u>29,795,235</u>	<u>33,585,815</u>	<u>70,317,994</u>	<u>52,980,641</u>	<u>379,889,891</u>	<u>372,498,334</u>
<b>Total debt</b>	<u>Ps. 174,020,146</u>	<u>Ps. 93,007,050</u>	<u>Ps. 112,779,978</u>	<u>Ps. 107,721,152</u>	<u>Ps. 169,903,260</u>	<u>Ps. 817,461,726</u>	<u>Ps. 1,474,893,313</u>	<u>Ps. 1,458,027,825</u>

Note: Numbers may not total due to rounding.

(1) The information in this table has been calculated using exchange rates at December 31, 2015 of: Ps. 17.2065 = U.S. \$1.00; Ps. 0.1429 = 1.00 Japanese yen; Ps. 25.49831 = 1.00 Pound sterling; Ps. 5.381175 = 1.00 UDI; Ps. 18.80843 = 1.00 euro; Ps. 17.34876 = 1.00 Swiss franc; and Ps. 12.55386 = 1.00 Australian dollar.

Source: PEMEX.

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**Quantitative Disclosure of Cash Flow's Maturities from Derivative Financial Instruments Held or Issued for Purposes other than Trading as of December 31, 2015<sup>(1)(2)</sup>**

	Year of expected maturity date						Total notional amount	Fair value <sup>(4)</sup>
	2016	2017	2018	2019	2020	Thereafter		
Hedging instruments <sup>(2)(4)</sup>								
Interest rate DFIs								
Interest rate swaps								
(U.S. dollars)								
Variable to fixed	Ps. 4,069,129	Ps. 4,079,836	Ps. 4,090,743	Ps. 4,102,179	Ps. 4,113,949	Ps. 16,869,943	Ps. 37,325,780	Ps. (192,666)
Average pay rate	2.09%	2.40%	3.05%	3.47%	3.82%	4.25%	n.a.	n.a.
Average receive rate	2.93%	2.97%	3.00%	3.02%	3.06%	3.24%	n.a.	n.a.
Interest rate swaps (pesos)								
Variable to fixed								
Average pay rate	—	—	—	—	—	—	—	—
Average receive rate	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Currency DFIs	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cross-currency swaps								
Receive euros/Pay U.S. dollars	19,725,704	28,956,612	—	—	30,263,050	83,793,246	162,738,612	(19,088,133)
Receive Japanese yen/Pay U.S. dollars	887,184	443,581	—	—	14,736,383	4,152,816	20,219,963	(5,419,164)
Receive Pounds sterling/ Pay U.S. dollars	—	—	—	—	—	10,951,197	10,951,197	(693,597)
Receive UDI/ Pay pesos	—	—	—	16,105,371	3,540,220	16,236,097	35,881,688	294,255
Receive Swiss francs/Pay U.S. dollars	—	—	—	5,653,336	10,042,704	—	15,696,040	(281,999)
Receive Australian dollars/Pay U.S. dollars	—	2,047,918	—	—	—	—	2,047,918	(46,526)
Exchange rate forward								
Receive euros/Pay U.S. dollars	—	—	—	—	—	—	—	—

Notes: Numbers may not total due to rounding.

n.a. = not applicable.

- (1) The information in this table has been calculated using the exchange rate at December 31, 2015 of Ps. 17.20650 = U.S. \$1.00 and Ps. 18.80843 = 1.00 euro.
- (2) Our management uses these DFIs to hedge market risk; however, these DFIs do not qualify for accounting purposes as hedges and are recorded in the financial statements as entered into for trading purposes.
- (3) Positive numbers represent a favorable fair value to us.
- (4) PMI's risk management policies and procedures establish that DFIs should be used only for hedging purposes; however, DFIs are not recorded as hedges for accounting purposes.

Source: PEMEX.

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	2016	2017	2018	2019	2020	Thereafter	Total Volume	Fair Value <sup>(2)</sup>
	(in MMBtu, except that average fixed and strike prices are in U.S. \$ per MMBtu)							(in thousands of nominal pesos)
Derivatives entered into with Customers of Pemex								
Industrial Transformation								
Short								
European Call Option	(4,584,088.00)	(642,200.00)	(234,000.00)	(3,750.00)	—	—	(5,464,038.00)	(5,310.49)
Average strike price	3.17	3.43	3.25	3.30	—	—	3.21	n.a.
Variable to Fixed Swap <sup>(3)</sup>	(3,154,691.00)	(1,142,042.00)	(490,592.00)	—	—	—	(4,787,325.00)	37,675.24
Average fixed price	3.02	2.77	2.68	—	—	—	2.92	n.a.
Long								
European Call Option	—	—	—	—	—	—	—	—
Average strike price	—	—	—	—	—	—	—	—
Derivatives entered into with Third Parties to Offset								
Transactions entered into with Customers								
Short								
European Call Option	—	—	—	—	—	—	—	—
Average strike price	—	—	—	—	—	—	—	n.a.
Long								
European Call Option	4,584,000.00	642,200.00	234,000.00	3,750.00	—	—	5,463,950.00	5,425.88
Average strike price	3.15	3.43	3.25	3.30	—	—	3.19	n.a.
Variable to Fixed Swap <sup>(4)</sup>	3,154,691.00	1,142,042.00	490,592.00	—	—	—	4,787,325.00	(32,990.09)
Average fixed price	2.96	2.72	2.62	—	—	—	2.87	n.a.

Notes: Numbers may not total due to rounding.

n.a. = not applicable.

(1) The information in this table has been calculated using the exchange rate at December 31, 2015 of Ps. 17.2065 = U.S. \$1.00.

(2) Positive numbers represent a favorable fair value to us. These values include CVA.

(3) Under short variable to fixed swaps entered into with customers of Pemex Industrial Transformation, we will pay a variable price and receive the fixed price specified in the contract.

(4) Under long variable to fixed swaps entered into with customers of Pemex Industrial Transformation, we will pay the fixed price specified in the contract and receive a variable price.

Source: Pemex Industrial Transformation

**Quantitative Disclosure of Cash Flows' Maturities from Derivative Financial Instruments (Petroleum Products) Held or Issued for Purposes other than Trading as of December 31, 2015<sup>(1)</sup>**

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Thereafter</u>	<u>Total</u>	<u>Fair</u>
				(in thousands of barrels)			Volume	Value <sup>(2)</sup>
								(in thousands of nominal pesos)
<b>Hedging Instruments</b>								
Exchange-traded futures <sup>(3) (5)</sup>	0.4	—	—	—	—	—	0.4	(7,944)
Exchange-traded swaps <sup>(4) (5)</sup>	11.6	—	—	—	—	—	11.6	550,952

Note: Numbers may not total due to rounding.

(1) The information in this table has been calculated using the exchange rate at December 31, 2015 of Ps. 17.2065 = U.S. \$1.00.

(2) Positive numbers represent a favorable fair value to P.M.I. Trading, Ltd. These values include CVA.

(3) Net position.

(4) Swaps registered in CME Clearport are included in these figures.

(5) The balance of these financial instruments is recognized as cash and cash equivalents. PMI Trading considered these financial assets to be fully liquid.

Source: P.M.I. Trading, Ltd.



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[Table of Contents](#)**Sensitivity Analysis**

We have entered into DFIs with the purpose to completely mitigate the market risk for specific flows or of predetermined volumes associated to our operations. Our DFIs have the same characteristics (such as underlying assets, payment dates, amount or volumes) as the hedged position, but have the opposite exposure to the market risk factors. As a result of these mitigation strategies, we have a negligible sensitivity to the hedged market risk factors. See Note 16 to our consolidated financial statements.

As discussed above, because our hedges are cash flow hedges, their effectiveness is preserved regardless of fluctuation in the underlying assets or reference variables. Accordingly, asset flows are fully offset by liabilities flows over time. Therefore, it is not necessary to measure or monitor our hedges' effectiveness.

Natural gas DFIs that Pemex Industrial Transformation offers to its domestic customers are reported as transactions with trading purposes. However, such operations are fully compensated by the operations entered into by Mex Gas Supply with its financial counterparties. Because of this mechanism, Pemex Industrial Transformation maintains a negligible or even null market risk exposure so that we do not consider necessary to conduct either a sensitivity analysis or a measurement or monitoring of the hedge effectiveness.

Other DFIs that we have entered into have the purpose of mitigating risks associated with the fluctuation of hydrocarbons prices. In these DFIs, the underlying assets are the same as those assets that we commercialize so that we do not consider necessary to conduct either a sensitivity analysis or a measurement of the hedge effectiveness. DFIs entered into to mitigate risks associated with the fluctuation of hydrocarbons prices related to PMI Trading's operations are recorded under cash and cash equivalents for accounting purposes due to their liquidity.

**Item 12. Description of Securities Other than Equity Securities**

Not applicable.

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[Table of Contents](#)**PART II****Item 13. Defaults, Dividend Arrearages and Delinquencies**

None.

**Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds**

None.

**Item 15. Controls and Procedures****(a) Disclosure Controls and Procedures**

We carried out an evaluation under the supervision and with the participation of our management, including our Director General (chief executive officer) and our Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of December 31, 2015. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, effective disclosure controls and procedures can provide only reasonable assurance of achieving their control objectives.

Based upon our evaluation and because of the material weakness in internal control over financial reporting described below, our Director General and our Chief Financial Officer concluded that our disclosure controls and procedures as of December 31, 2015 were not effective to provide reasonable assurance that information required to be disclosed in the reports we file and submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Director General and our Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

**(b) Management's Annual Report on Internal Control over Financial Reporting**

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Our internal control over financial reporting includes those policies and procedures that:

- (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with IFRS in accordance with Item 18 of Form 20-F, and that our receipts and expenditures are being made only in accordance with authorizations of management and directors of the relevant entity; and
- (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2015. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in its Internal Control-Integrated Framework (2013), supplemented for information technologies with the guidelines suggested by *IT Control Objectives for Sarbanes-Oxley (3rd Edition)*, published by the Information Systems Audit and Control Association, which were in effect as of December 31, 2015.

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Management concluded that our internal control over financial reporting was not effective as of December 31, 2015. Based on our assessment and those criteria, management concluded that a material weakness existed in our internal control over financial reporting as of December 31, 2015 because some of our internal controls did not effectively respond to the nature and magnitude of the changes in the economic landscape. In particular, the sharp decline in the price of crude oil in the fourth quarter of 2015 triggered the need to test carrying amounts of our wells, pipelines, properties, plant and equipment for impairment. In performing the tests, we used discount rates that were lower than those required by IFRS and those used by peers in the sector and categorized our entire refinery system as a single cash generating unit instead of viewing each refinery as an independent cash-generating unit in order to determine impairment charges with respect to our wells, pipelines, properties, plant and equipment, as required by IFRS. This resulted in an estimation of recoverable amounts of assets that did not accurately reflect operating and economic conditions as of the date of our consolidated financial statements. For the reasons set forth above, these unaudited financial statements reflected only a Ps. 229.1 billion impairment of wells, pipelines, properties, plant and equipment in 2015. In addition, our internal controls did not provide a mechanism that enabled us to ensure that our disclosure regarding our impairment evaluation and our liquidity condition complied with IFRS. In our unaudited financial statements as of and for the fiscal year ended December 31, 2015, we did not appropriately disclose the assumptions for the computation of the impairment, the uncertainties about the estimates used to calculate impairment and the relevant assets impacted by the impairment and issues related to significant doubt about our ability to continue operating as a going concern in accordance with IFRS.

The difference in the magnitude of the impairment charge of our property, plant and equipment in our unaudited consolidated financial statements was corrected prior to the issuance of our audited consolidated financial statements as of and for the fiscal year ended December 31, 2015. In our audited consolidated financial statements, as a result of the adjustment in discount rates and the changes in the cash-generating units determination, we recognized an additional impairment charge of Ps. 248.8 billion, which resulted in our recording an aggregate total impairment charge of Ps. 477.9 billion with respect to our wells, pipelines, properties, plant and equipment. We also corrected the disclosures described above.

Accordingly, our management has determined that these control deficiencies constitute a material weakness. During the preparation of our audited consolidated financial statements as of and for the year ended December 31, 2015, we performed analyses of and made adjustments to the methodologies and assumptions used in our calculation of the impairment of long-lived assets in order to properly reflect operating and economic conditions. In addition, we corrected our disclosure of impairment charges to ensure that the impairment computation — its assumptions, the uncertainties about the estimates used to calculate impairment and the relevant assets that were impacted by the impairment — had been properly disclosed in accordance with IFRS. Finally, we also added the required disclosure regarding significant doubt about our ability to continue operating as a going concern. Accordingly, our audited consolidated financial statements as of December 31, 2015 properly disclose the recognition of the impairment of our assets as of that date and the significant doubt about our ability to continue operating as a going concern.

These control deficiencies, if unremediated, could, in another reporting period, result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected by the controls; however, management is actively engaged in the planning for, and implementation of, remediation efforts to address the material weakness identified above. Management has taken the following actions to address the material weakness:

1. We have re-designed our controls, including the implementation of new controls, relating to (1) the long-lived impairment analysis, including the enhancement of the evaluation of the components of future cash flows, particularly the assumptions utilized and the comparison to the requirements of IFRS in order to allow us timely identify events that may impact the assumptions and criteria for the computation, and (2) the assessment of our ability to continue operating as a going concern and our process for making the appropriate corresponding disclosure.
2. We are updating our internal control assessment methodology in order to enhance the design and documentation of management review controls by including new internal control elements to oversee and monitor and are verifying the appropriate design and effectiveness of the internal controls over (1) our asset impairment tests to determine the recoverable amounts of our wells, pipelines, properties, plant and equipment, and (2) the assessment of uncertainties regarding our ability to continue operating as a going concern and other liquidity issues.
3. In addition we are updating our oversight and monitoring program for 2016 in order to perform timely tests of the effectiveness of the internal controls in connection with our (1) asset impairment tests to determine the recoverable amounts of our wells, pipelines, properties, plant and equipment and (2) assessment of our ability to continue operating as a going concern and other liquidity issues. We expect to take the necessary steps to complete our remediation plan and fully establish enhanced controls designed to address the material weakness for each of the quarters to be reported during 2016.
4. We have strengthened our internal controls to establish that as part of the process for determining impairment charges, we will review the assumptions we use to calculate impairment in order to ensure that the criteria and variables used in that calculation accurately reflect the operating and economic conditions as of the date of our calculations and will include the appropriate disclosure in accordance with IFRS.

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5. We have strengthened our internal controls to properly assess each of the relevant factors that could create uncertainty as to our ability to continue operating as a going concern, our liquidity condition and corresponding disclosure.

We believe that these actions will fully remediate the material weakness and provide us with fair assurance to produce reliable financial reports.

(c) **Attestation Report of the Independent Registered Public Accounting Firm**

Not applicable.

(d) **Changes in Internal Control over Financial Reporting**

Other than the material weakness described above, there has been no change in our internal control over financial reporting during 2015 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**Item 16A. Audit Committee Financial Expert**

Mr. Alberto Tiburcio Celorio, member of the Audit Committee of Petróleos Mexicanos, qualifies as an audit committee financial expert within the meaning of this Item 16A, and is independent, as defined in Rule 10A-3 under the Exchange Act.

**Item 16B. Code of Ethics**

In accordance with the Petróleos Mexicanos Law, we adopted a new code of ethics, as defined in Item 16B of Form 20-F under the Exchange Act, which took effect on November 11, 2014 and replaced the code of ethics that had been in place since 2004. Our code of ethics applies to the members of the Boards Directors of Petróleos Mexicanos and the subsidiary entities and all of our employees, including our Director General (chief executive officer), our Chief Financial Officer, our chief accounting officer and all other employees performing similar functions. The new code of ethics did not substantively alter any of its requirements as compared with the code of ethics that was in effect prior to the approval of the new code of ethics. Our code of ethics is available on our website at <http://www.pemex.com>. If we amend the provisions of our Code of Ethics that apply to our chief executive officer, our Chief Financial Officer, our chief accounting officer and persons performing similar functions, or if we grant any waiver of such provisions, we will disclose such amendment or waiver on our website at the same address.

**Item 16C. Principal Accountant Fees and Services**

In its meeting held on October 8, 2013, and effective as of October 15, 2013, the former Audit and Performance Evaluation Committee appointed BDO Mexico as external auditor of the financial statements of Petróleos Mexicanos and of the consolidated financial statements of Petróleos Mexicanos and its subsidiary entities for the fiscal years 2013 and 2014, prepared in accordance with *Normas de Información Financiera Gubernamental para el Sector Paraestatal* (Mexican Standards for Governmental Financial Information for Public Sector Entities). The former Audit and Performance Evaluation Committee also appointed BDO Mexico as external auditor to audit the consolidated financial statements of Petróleos Mexicanos and its subsidiary entities and subsidiary companies for the fiscal years 2013 and 2014, prepared in accordance with IFRS, as well as to perform other services associated with the auditing of our financial statements. See “Item 6—Directors, Senior Management and Employees—Audit Committee.”

In its meeting held on September 24, 2015, the Board of Directors of Petróleos Mexicanos appointed BDO Mexico as external auditor of Petróleos Mexicanos, its productive state-owned subsidiaries and subsidiary companies for the fiscal year 2015 based on the proposal of the Audit Committee.

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**Audit and Non-Audit Fees**

The following table sets forth the aggregate fees billed to us for the fiscal years 2015 and 2014 by BDO Mexico, our independent registered public accounting firm for the years ended December 31, 2015 and 2014.

	<b>Year ended December 31,</b>	
	<b>2014</b>	<b>2015</b>
	<b>(in thousands of nominal pesos)</b>	
Audit fees	Ps. 34,461	Ps. 33,704
Audit-related fees	—	—
Tax fees	—	—
All other fees	—	—
<b>Total fees</b>	<b>Ps. 34,461</b>	<b>Ps. 33,704</b>

Audit fees in the table above are the aggregate fees billed by BDO Mexico for services provided in connection with the audits of our annual financial statements in each year, statutory filings and statutory audits, filings with financial regulators, regulatory filings, limited review of interim financial information, review of public filings of financial information and reviews of documents related to offerings of securities, as well as comfort and consent letters, and services provided in accordance with the instructions of the former Audit and Performance Evaluation Committee.

**Audit Committee Approval Policies and Procedures**

In accordance with the Petróleos Mexicanos Law, the Audit Committee nominates the external auditor for approval by the Board of Directors of Petróleos Mexicanos and issues an opinion regarding the external auditor's report on our financial statements. See "Item 6—Directors, Senior Management and Employees—Audit Committee."

On December 8, 2009, the former Audit and Performance Evaluation Committee issued criteria, which have not been reviewed by the new Audit Committee, for the performance of services by the external auditor. In accordance with these criteria, the external auditor may audit the financial statements of Petróleos Mexicanos and its subsidiary entities and subsidiary companies for no more than four consecutive fiscal years as of the date these criteria were issued, except in special circumstances. An auditing firm that has performed such services may again be considered in the selection process for our external auditor after a period of at least two years since concluding such services.

**Item 16D. Exemptions from the Listing Standards for Audit Committees**

Not applicable.

**Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers**

Not applicable.

**Item 16F. Change in Registrant's Certifying Accountant**

Not applicable.

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Not applicable.

**Item 16H. Mine Safety Disclosure**

Not applicable.

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[Table of Contents](#)**PART III****Item 17. Financial Statements**

Not applicable.

**Item 18. Financial Statements**

See pages F-1 through F-127, incorporated herein by reference.

**Item 19. Exhibits. Documents filed as exhibits to this Form 20-F:**

- 1.1 *Ley de Petróleos Mexicanos* (Petróleos Mexicanos Law), effective October 7, 2014 (English translation) (previously filed as Exhibit 1.1 to Petróleos Mexicanos' annual report on Form 20-F (File No. 0-99) on April 30, 2015 and incorporated by reference herein).
- 1.2 *Reglamento de la Ley de Petróleos Mexicanos* (Regulations to the Petróleos Mexicanos Law), effective November 1, 2014 and as amended as of February 9, 2015 (English translation) (previously filed as Exhibit 1.2 to Petróleos Mexicanos' annual report on Form 20-F (File No. 0-99) on April 30, 2015 and incorporated by reference herein).
- 1.3 *Acuerdo de Creación de la Empresa Productiva del Estado Subsidiaria de Petróleos Mexicanos, denominada Pemex Exploración y Producción* (Creation Resolution of the Productive State-Owned Subsidiary of Petróleos Mexicanos, denominated Pemex Exploration and Production), effective June 1, 2015 (English translation) (previously filed as Exhibit 3.4 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-205763) on July 21, 2015 and incorporated by reference herein).
- 1.4 *Acuerdo de Creación de la Empresa Productiva del Estado Subsidiaria de Petróleos Mexicanos, denominada Pemex Cogeneración y Servicios* (Creation Resolution of the Productive State-Owned Subsidiary of Petróleos Mexicanos, denominated Pemex Cogeneration and Services), effective June 1, 2015 (English translation) (previously filed as Exhibit 3.5 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-205763) on July 21, 2015 and incorporated by reference herein).
- 1.5 *Acuerdo de Creación de la Empresa Productiva del Estado Subsidiaria de Petróleos Mexicanos, denominada Pemex Perforación y Servicios* (Creation Resolution of the Productive State-Owned Subsidiary of Petróleos Mexicanos, denominated Pemex Drilling and Services), effective August 1, 2015 (English translation) (previously filed as Exhibit 3.5 to Amendment No. 1 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-205763) on February 8, 2016 and incorporated by reference herein).
- 1.6 *Acuerdo de Creación de la Empresa Productiva del Estado Subsidiaria de Petróleos Mexicanos, denominada Pemex Logística* (Creation Resolution of the Productive State-Owned Subsidiary of Petróleos Mexicanos, denominated Pemex Logistics), effective October 1, 2015 (English translation) (previously filed as Exhibit 3.6 to Amendment No. 1 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-205763) on February 8, 2016 and incorporated by reference herein).
- 1.7 *Acuerdo de Creación de la Empresa Productiva del Estado Subsidiaria de Petróleos Mexicanos, denominada Pemex Transformación Industrial* (Creation Resolution of the Productive State-Owned Subsidiary of Petróleos Mexicanos, denominated Pemex Industrial Transformation), effective November 1, 2015 (English translation) (previously filed as Exhibit 3.7 to Amendment No. 1 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-205763) on February 8, 2016 and incorporated by reference herein).

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- 2.1 Indenture, dated as of September 18, 1997, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company) (previously filed as Exhibit 4.1 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-7796) on October 17, 1997 and incorporated by reference herein).
- 2.2 Indenture, dated as of August 7, 1998, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company) (previously filed as Exhibit 4.1 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-9310) on August 24, 1998 and incorporated by reference herein).
- 2.3 Indenture, dated as of July 31, 2000, among the Pemex Project Funding Master Trust, Petróleos Mexicanos and Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company) (previously filed as Exhibit 2.5 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 28, 2001 and incorporated by reference herein).
- 2.4 First supplemental indenture dated as of September 30, 2009, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of July 31, 2000 (previously filed as Exhibit 2.4 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 29, 2010 and incorporated by reference herein).
- 2.5 Indenture, dated as of December 30, 2004, among the Pemex Project Funding Master Trust, Petróleos Mexicanos and Deutsche Bank Trust Company Americas (previously filed as Exhibit 2.7 to Petróleos Mexicanos' Annual Report on Form 20-F (File No. 0-99) on June 30, 2005 and incorporated by reference herein).
- 2.6 First supplemental indenture dated as of September 30, 2009, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of December 30, 2004 (previously filed as Exhibit 2.6 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 29, 2010 and incorporated by reference herein).
- 2.7 Indenture, dated as of January 27, 2009, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas (previously filed as Exhibit 2.5 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 30, 2009 and incorporated by reference herein).
- 2.8 Fiscal Agency Agreement between Petróleos Mexicanos and Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company), dated as of June 16, 1993, and amended and restated as of February 26, 1998 (previously filed as Exhibit 3.1 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 29, 2000 and incorporated by reference herein).
- 2.9 Trust Agreement, dated as of November 10, 1998, among The Bank of New York, The Bank of New York (Delaware) and Petróleos Mexicanos (previously filed as Exhibit 3.1 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 30, 1999 and incorporated by reference herein).
- 2.10 Amendment No. 1, dated as of November 17, 2004, to the Trust Agreement among The Bank of New York, The Bank of New York (Delaware) and Petróleos Mexicanos dated as of November 10, 1998 (previously filed as Exhibit 2.10 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 30, 2005 and incorporated by reference herein).
- 2.11 Amendment No. 2, dated as of December 22, 2004, to the Trust Agreement among The Bank of New York, The Bank of New York (Delaware) and Petróleos Mexicanos dated as of November 10, 1998 (previously filed as Exhibit 2.11 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 30, 2005 and incorporated by reference herein).
- 2.12 Amendment No. 3, dated as of August 17, 2006, to the Trust Agreement among The Bank of New York, The Bank of New York (Delaware) and Petróleos Mexicanos dated as of November 10, 1998 (previously filed as Exhibit 3.4 to the Petróleos Mexicanos Registration Statement on Form F-4/A (File No. 333-136674) on October 27, 2006 and incorporated by reference herein).



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- 2.13 Assignment and Indemnity Agreement, dated as of November 10, 1998, among Petróleos Mexicanos, Pemex-Exploración y Producción, Pemex-Refinación, Pemex-Gas y Petroquímica Básica and the Pemex Project Funding Master Trust (previously filed as Exhibit 3.2 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 30, 1999 and incorporated by reference herein).
- 2.14 Amendment No. 1, dated as of August 17, 2006, to the Assignment and Indemnity Agreement among Petróleos Mexicanos, Pemex-Exploración y Producción, Pemex-Refinación, Pemex-Gas y Petroquímica Básica, Pemex-Petroquímica, and the Pemex Project Funding Master Trust dated as of November 10, 1998 (previously filed as Exhibit 4.7 to the Petróleos Mexicanos Registration Statement on Form F-4/A (File No. 333-136674-04) on October 27, 2006 and incorporated by reference herein).
- 2.15 Guaranty Agreement, dated July 29, 1996, among Petróleos Mexicanos, Pemex-Exploración y Producción, Pemex-Refinación and Pemex-Gas y Petroquímica Básica (previously filed as Exhibit 4.4 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-7796) on October 17, 1997 and incorporated by reference herein).
- 2.16 Amendment Agreement dated as of June 24, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, amending the terms and conditions of the Petróleos Mexicanos 8.625% Bonds due 2023 issued pursuant to the Fiscal Agency Agreement between Petróleos Mexicanos and Deutsche Bank Trust Company (as amended and restated) (previously filed as Exhibit 4.9 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-198588) on September 5, 2014 and incorporated by reference herein).
- 2.17 First supplemental indenture dated as of June 24, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of September 18, 1997 (previously filed as Exhibit 4.10 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-198588) on September 5, 2014 and incorporated by reference herein).
- 2.18 First supplemental indenture dated as of June 24, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of August 7, 1998 (previously filed as Exhibit 4.11 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-198588) on September 5, 2014 and incorporated by reference herein).
- 2.19 Second supplemental indenture dated as of June 24, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of July 31, 2000 (previously filed as Exhibit 4.12 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-198588) on September 5, 2014 and incorporated by reference herein).
- 2.20 Second supplemental indenture dated as of June 24, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of December 30, 2004 (previously filed as Exhibit 4.13 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-198588) on September 5, 2014 and incorporated by reference herein).
- 2.21 Fourth supplemental indenture dated as of June 24, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of January 27, 2009 (previously filed as Exhibit 4.14 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-198588) on September 5, 2014 and incorporated by reference herein).
- 2.22 Third supplemental indenture dated as of September 10, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of July 31, 2000 (previously filed as Exhibit 2.22 to Petróleos Mexicanos' annual report on Form 20-F (File No. 0-99) on April 30, 2015 and incorporated by reference herein).
- 2.23 Fifth supplemental indenture dated as of October 15, 2014, between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of January 27, 2009 previously filed as Exhibit 2.23 to Petróleos Mexicanos' annual report on Form 20-F (File No. 0-99) on April 30, 2015 and incorporated by reference herein).
- 2.24 Sixth supplemental indenture dated as of December 8, 2015 between Petróleos Mexicanos and Deutsche Bank Trust Company Americas, to the indenture dated as of January 27, 2009 (previously filed as Exhibit 4.17 to Amendment No. 1 to the Petróleos Mexicanos Registration Statement on Form F-4 (File No. 333-205763) on February 8, 2016 and incorporated by reference herein).

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The registrant agrees to furnish to the U.S. Securities and Exchange Commission, upon request, copies of any instruments that define the rights of holders of long-term debt of the registrant that are not filed as exhibits to this report.

- 4.1 Receivables Purchase Agreement, dated as of December 1, 1998, by and among Pemex Finance, Ltd., P.M.I. Comercio Internacional, S.A. de C.V., P.M.I. Services, B.V. and Pemex-Exploración y Producción. (previously filed as Exhibit 3.3 to the Petróleos Mexicanos Annual Report on Form 20-F (File No. 0-99) on June 30, 1999 and incorporated by reference herein).
- 7.1 Computation of Ratio of Earnings to Fixed Charges.
- 8.1 For a list of subsidiaries, their jurisdiction of incorporation and the names under which they do business, see "Consolidated Structure of PEMEX" on page 4.
- 10.1 Consent letters of Ryder Scott Company, L.P.
- 10.2 Reports on Reserves Data by Ryder Scott Company, L.P., Independent Qualified Reserves Evaluator or Auditor, as of December 31, 2015.
- 10.3 Consent letters of Netherland, Sewell International, S. de R.L. de C.V.
- 10.4 Reports on Reserves Data by Netherland, Sewell International, S. de R.L. de C.V., Independent Qualified Reserves Evaluator or Auditor, as of January 1, 2016.
- 10.5 Consent letters of DeGolyer and MacNaughton.
- 10.6 Reports on Reserves Data by DeGolyer and MacNaughton, Independent Qualified Reserves Evaluator or Auditor, as of January 1, 2016.
- 12.1 CEO Certification pursuant to Rule 13a-14(a)/15d-14(a).
- 12.2 CFO Certification pursuant to Rule 13a-14(a)/15d-14(a).
- 13.1 Certification pursuant to Rule 13a-14(b)/15d-14(b) and 18 U.S.C. §1350.

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Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, as amended, the registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and has duly caused and authorized the undersigned to sign this report on its behalf.

PETRÓLEOS MEXICANOS

By: /s/ JUAN PABLO NEWMAN AGUILAR

Name: Juan Pablo Newman Aguilar

Title: Chief Financial Officer

Date: May 16, 2016

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
AND SUBSIDIARY COMPANIES  
(PREVIOUSLY PETRÓLEOS MEXICANOS, SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES)**

**CONSOLIDATED FINANCIAL STATEMENTS**

**DECEMBER 31, 2015, 2014 AND 2013 AND REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
AND SUBSIDIARY COMPANIES  
(PREVIOUSLY PETRÓLEOS MEXICANOS, SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES (SEE NOTE 1))  
CONSOLIDATED FINANCIAL STATEMENTS  
DECEMBER 31, 2015, 2014 AND 2013**

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To the General Comptroller's Office  
and the Board of Directors of  
Petróleos Mexicanos:

We have audited the accompanying consolidated statements of financial position of Petróleos Mexicanos, Productive State-Owned Subsidiaries and Subsidiary Companies ("PEMEX") (previously Petróleos Mexicanos, Subsidiary Entities and Subsidiary Companies) as of December 31, 2015 and 2014, and the related consolidated statements of comprehensive income, changes in equity (deficit), and cash flows for each of the three years in the period ended December 31, 2015. These consolidated financial statements are the responsibility of PEMEX's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. PEMEX is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of PEMEX's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Petróleos Mexicanos, Productive State-Owned Subsidiaries and Subsidiary Companies as of December 31, 2015 and 2014, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2015, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

The accompanying consolidated financial statements have been prepared assuming that PEMEX will continue as a going concern. As described in Note 2 to the consolidated financial statements, PEMEX has suffered recurring losses from operations and has a working capital deficiency and a net equity deficit that raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

**CASTILLO MIRANDA Y COMPAÑÍA, S. C.**

/s/ BERNARDO SOTO PEÑAFIEL  
C.P.C. Bernardo Soto Peñafiel

Mexico City,  
May 16, 2016

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
AND SUBSIDIARY COMPANIES**  
**(PREVIOUSLY PETRÓLEOS MEXICANOS, SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES (SEE NOTE 1))**  
**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**  
**AS OF DECEMBER 31, 2015 AND 2014**  
**(Figures stated in thousands, except as noted)**

	<u>Note</u>	<u>December 31, 2015 (Unaudited; U.S. dollars)</u>	<u>December 31, 2015</u>	<u>December 31, 2014</u>
<b>ASSETS</b>				
Current assets:				
Cash and cash equivalents	6	U.S.\$ 6,356,254	Ps. 109,368,880	Ps. 117,988,528
Accounts receivable, net	7	4,605,575	79,245,821	114,422,967
Inventories, net	8	2,543,860	43,770,928	49,938,656
Held-for-sale non-financial assets	9	1,930,303	33,213,762	—
Available-for-sale financial assets	10			5,414,574
Derivative financial instruments	16	93,052	1,601,106	1,562,556
Total current assets		<u>15,529,044</u>	<u>267,200,497</u>	<u>289,327,281</u>
Non-current assets:				
Available-for-sale financial assets	10	229,256	3,944,696	—
Permanent investments in associates	11	1,404,446	24,165,599	22,014,760
Wells, pipelines, properties, plant and equipment, net	12	78,138,124	1,344,483,631	1,783,374,138
Deferred taxes, net	20	3,190,677	54,900,384	4,142,618
Restricted cash	6	537,400	9,246,772	6,884,219
Intangible assets	13	831,370	14,304,961	14,970,904
Other assets	14	3,336,393	57,407,660	7,654,360
Total non-current assets		<u>87,667,666</u>	<u>1,508,453,703</u>	<u>1,839,040,999</u>
Total assets		<u>U.S.\$ 103,196,710</u>	<u>Ps. 1,775,654,200</u>	<u>Ps. 2,128,368,280</u>
<b>LIABILITIES</b>				
Current liabilities:				
Short-term debt and current portion of long-term debt	15	U.S.\$ 11,188,136	Ps. 192,508,668	Ps. 145,866,217
Taxes and duties payable	20	2,501,771	43,046,716	42,420,090
Suppliers		9,723,898	167,314,243	116,178,295
Accounts and accrued expenses payable		769,326	13,237,407	12,235,005
Derivative financial instruments	16	1,586,650	27,300,687	17,459,740
Total current liabilities		<u>25,769,781</u>	<u>443,407,721</u>	<u>334,159,347</u>
Long-term liabilities:				
Long-term debt	15	75,603,590	1,300,873,167	997,384,286
Employee benefits	17	74,354,775	1,279,385,441	1,474,088,528
Provisions for sundry creditors	18	4,253,729	73,191,796	78,422,943
Other liabilities		481,686	8,288,139	7,718,088
Deferred taxes	20	126,919	2,183,834	4,315,942
Total long-term liabilities		<u>154,820,669</u>	<u>2,663,922,377</u>	<u>2,561,929,787</u>
Total liabilities		<u>U.S.\$ 180,590,480</u>	<u>Ps. 3,107,330,098</u>	<u>Ps. 2,896,089,134</u>
<b>EQUITY (DEFICIT), NET</b>				
Controlling interest:				
Certificates of Contribution "A"		11,309,960	194,604,835	134,604,835
Mexican Government contributions		2,541,516	43,730,591	43,730,591
Legal reserve		58,241	1,002,130	1,002,130
Accumulated other comprehensive result		(17,785,312)	(306,022,973)	(394,594,466)
Accumulated deficit:				
From prior years		(32,127,903)	(552,808,762)	(287,605,549)
Net loss for the year		(41,404,992)	(712,434,997)	(265,203,213)
Total controlling interest		<u>(77,408,490)</u>	<u>(1,331,929,176)</u>	<u>(768,065,672)</u>
Total non-controlling interest		14,720	253,278	344,818
Total equity (deficit), net		<u>U.S.\$ (77,393,770)</u>	<u>(1,331,675,898)</u>	<u>(767,720,854)</u>
Total liabilities and equity (deficit), net		<u>U.S.\$ 103,196,710</u>	<u>Ps. 1,775,654,200</u>	<u>Ps. 2,128,368,280</u>

The accompanying notes are an integral part of these consolidated financial statements.

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
AND SUBSIDIARY COMPANIES**  
**(PREVIOUSLY PETRÓLEOS MEXICANOS, SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES (SEE NOTE 1))**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**  
**FOR THE YEARS ENDED DECEMBER 31, 2015, 2014 AND 2013**  
**(Figures stated in thousands, except as noted)**

	Note	2015 (Unaudited; U.S. dollars)	2015	2014	2013
Net sales:					
Domestic	5	U.S. \$ 43,369,419	Ps. 746,235,912	Ps. 944,997,979	Ps. 910,187,634
Export	5	23,666,315	407,214,445	630,291,313	687,677,634
Services income	5	750,421	12,912,112	11,438,582	10,339,357
Total of sales		67,786,154	1,166,362,469	1,586,727,874	1,608,204,625
Impairment of wells, pipelines, properties, plant and equipment	12-d	27,776,985	477,944,690	22,645,696	25,608,835
Benefit of the period of employee benefits	17	(5,357,109)	(92,177,089)	—	—
Cost of sales		52,019,231	895,068,904	842,634,784	814,006,338
Gross (loss) income		(6,652,953)	(114,474,036)	721,447,394	768,589,452
Other (expenses) revenues, net	22	(137,928)	(2,373,266)	37,552,397	90,135,685
General expenses:					
Transportation, distribution and sale expenses		1,681,262	28,928,639	32,182,666	32,448,436
Administrative expenses		6,536,604	112,472,095	111,337,114	98,654,472
Benefit of the period of employee benefits	17	(6,036,146)	(103,860,955)	—	—
Operating (loss) income		(8,972,601)	(154,387,081)	615,480,011	727,622,229
Financing income <sup>1</sup>		871,232	14,990,859	3,014,187	8,735,699
Financing cost <sup>2</sup>		(3,938,837)	(67,773,593)	(51,559,060)	(39,586,484)
Derivative financial instruments (cost) income, net	16	(1,246,615)	(21,449,877)	(9,438,570)	1,310,973
Exchange loss, net	16	(8,994,599)	(154,765,574)	(76,999,161)	(3,951,492)
Profit sharing in associates, net	11	(13,308,819)	(228,998,185)	(134,982,604)	(33,491,304)
(Loss) Income before duties, taxes and other		134,723	2,318,115	34,368	706,710
Hydrocarbon extraction duties and others		(22,146,697)	(381,067,151)	480,531,775	694,837,635
Income tax	20	21,915,411	377,087,514	760,912,095	857,356,289
Total duties, taxes and other	20(p),(q)	(2,649,421)	(45,587,267)	(14,837,331)	7,539,773
Net loss		19,265,990	331,500,247	746,074,764	864,896,062
Other comprehensive results:		(41,412,687)	(712,567,398)	(265,542,989)	(170,058,427)
Items that will be reclassified subsequently to profit or loss:					
Available-for-sale financial assets	10	(186,343)	(3,206,316)	(765,412)	4,453,495
Currency translation effect	19	770,761	13,262,101	11,379,657	2,440,643
Items that will not be reclassified subsequently to profit or loss:					
Actuarial (losses) gains — employee benefits	17	4,565,517	78,556,569	(275,962,370)	247,376,029
Total other comprehensive results		5,149,935	88,612,354	(265,348,125)	254,270,167
Total comprehensive result		U.S. \$ (36,262,752)	Ps. (623,955,044)	Ps. (530,891,114)	Ps. 84,211,740
Net loss attributable to:					
Controlling interest		U.S. \$ (41,404,992)	Ps. (712,434,997)	Ps. (265,203,213)	Ps. (169,865,633)
Non-controlling interest		(7,695)	(132,401)	(339,776)	(192,794)
Net loss		U.S. \$ (41,412,687)	Ps. (712,567,398)	Ps. (265,542,989)	Ps. (170,058,427)
Other comprehensive results attributable to:					
Controlling interest		U.S. \$ 5,147,560	Ps. 88,571,493	Ps. (265,528,837)	Ps. 254,271,944
Non-controlling interest		2,375	40,861	180,712	(1,777)
Total other comprehensive results		U.S. \$ 5,149,935	Ps. 88,612,354	Ps. (265,348,125)	Ps. 254,270,167
Comprehensive income (loss):					
Controlling interest		U.S. \$ (36,257,432)	Ps. (623,863,504)	Ps. (530,732,050)	Ps. 84,406,311
Non-controlling interest		(5,320)	(91,540)	(159,064)	(194,571)
Total comprehensive result		U.S. \$ (36,262,752)	Ps. (623,955,044)	Ps. (530,891,114)	Ps. 84,211,740

The accompanying notes are an integral part of these consolidated financial statements.

<sup>1</sup> Includes financing income from investments and gain on discount rate of plugging of wells in 2015.

<sup>2</sup> Mainly interest on debt.



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**CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (DEFICIT), NET**  
**FOR THE YEARS ENDED DECEMBER 31, 2015, 2014 AND 2013**  
**(Figures stated in thousands, except as noted)**  
(See Note 21)

	Controlling interest											Non controlling interest	Total equity
	Certificates of contribution "A"	Mexican Government contributions	Legal reserve	Accumulated other comprehensive income (loss)			Accumulated deficit			Total			
				Available- for sale financial assets	Cumulative currency translation effect	Actuarial (losses) gains on employee benefits effect	For the year	From prior years					
<b>Balances as of December 31, 2013</b>	Ps. 114,604,835	Ps. 115,313,691	Ps. 1,002,130	Ps. (1,800,219)	Ps. 5,127,480	Ps. (132,392,890)	Ps. (169,865,633)	Ps. (117,739,916)	Ps. (185,750,522)	Ps. 503,882	Ps. (185,246,640)		
Transfer to accumulated deficit	—	—	—	—	—	—	169,865,633	(169,865,633)	—	—	—		
Increase in Certificates of Contribution "A"	20,000,000	—	—	—	—	—	—	—	20,000,000	—	20,000,000		
Increase in Mexican Government Contributions to Petróleos Mexicanos	—	2,000,000	—	—	—	—	—	—	2,000,000	—	2,000,000		
Decrease in Mexican Government Contributions	—	(73,583,100)	—	—	—	—	—	—	(73,583,100)	—	(73,583,100)		
Total comprehensive income (loss)	—	—	—	(765,412)	11,192,953	(275,956,378)	(265,203,213)	—	(530,732,050)	(159,064)	(530,891,114)		
<b>Balances as of December 31, 2014</b>	134,604,835	43,730,591	1,002,130	(2,565,631)	16,320,433	(408,349,268)	(265,203,213)	(287,605,549)	(768,065,672)	344,818	(767,720,854)		
Transfer to accumulated deficit	—	—	—	—	—	—	265,203,213	(265,203,213)	—	—	—		
Increase in Certificates of Contribution "A"	60,000,000	—	—	—	—	—	—	—	60,000,000	—	60,000,000		
Total comprehensive income (loss)	—	—	—	(3,206,316)	13,229,927	78,547,882	(712,434,997)	—	(623,863,504)	(91,540)	(623,955,044)		
<b>Balances as of December 31, 2015</b>	Ps. 194,604,835	Ps. 43,730,591	Ps. 1,002,130	Ps. (5,771,947)	Ps. 29,550,360	Ps. (329,801,386)	Ps. (712,434,997)	Ps. (552,808,762)	Ps. (1,331,929,176)	Ps. 253,278	Ps. (1,331,675,898)		
<b>Balances as of December 31, 2015 (Unaudited U.S. dollars)</b>	U.S.\$ 11,309,960	U.S.\$ 2,541,516	U.S.\$ 58,241	U.S.\$ (335,452)	U.S.\$ 1,717,395	U.S.\$ (19,167,256)	U.S.\$ (41,404,992)	U.S.\$ (32,127,903)	U.S.\$ (77,408,490)	U.S.\$ 14,720	U.S.\$ (77,393,770)		

The accompanying notes are an integral part of these consolidated financial statements.

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**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
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	2015 (Unaudited; U.S. dollars)	2015	2014	2013
<b>Operating activities</b>				
Net (loss) income	U.S. \$(41,412,687)	Ps. (712,567,398)	Ps. (265,542,989)	Ps. (170,058,427)
Depreciation and amortization	9,760,919	167,951,250	143,074,787	148,491,704
Impairment of wells, pipelines, properties, plant and equipment	27,776,985	477,944,690	22,645,696	25,608,835
Unsuccessful wells	1,349,113	23,213,519	12,148,028	12,497,726
Disposal of wells, pipelines, properties, plant and equipment	1,431,932	24,638,537	6,370,937	14,699,620
Profit (loss) share in associates	(134,723)	(2,318,115)	(34,368)	(706,710)
Gain on sale of share in associates	(39,557)	(680,630)	—	—
Dividends	(20,919)	(359,941)	(736,302)	(914,116)
Effects of net present value of reserve for well abandonment	(35,345)	(608,160)	9,169,327	(5,240,305)
Gain on sale of properties, plant and equipment	—	—	—	(768,000)
Net loss (profit) on available-for-sale financial assets	—	—	215,119	(278,842)
Amortization expenses related to debt issuance	(133,650)	(2,299,657)	312,296	(1,890,710)
Unrealized foreign exchange loss	8,873,173	152,676,256	78,884,717	3,308,299
Interest expense	3,938,837	67,773,593	50,909,624	39,303,943
	<u>11,354,078</u>	<u>195,363,944</u>	<u>57,416,872</u>	<u>64,053,017</u>
Derivative financial instruments	569,692	9,802,397	16,354,342	1,840,184
Accounts receivable	1,918,059	33,003,083	9,261,025	5,401,035
Inventories	358,453	6,167,728	6,975,844	(66,930)
Other assets	(964,889)	(16,602,365)	(18,984,877)	(12,905,916)
Accounts payable and accrued expenses	58,257	1,002,403	(1,959,714)	4,879,180
Taxes paid	36,418	626,626	1,130,595	(2,691,348)
Suppliers	2,971,897	51,135,948	9,433,102	45,231,742
Provisions for sundry creditors	(530,424)	(9,126,733)	356,582	8,187,800
Employee benefits	(6,742,930)	(116,022,232)	78,970,008	78,043,140
Deferred taxes	(3,081,054)	(53,014,159)	(24,597,648)	(1,635,382)
<b>Net cash flows from operating activities</b>	<u>5,947,557</u>	<u>102,336,640</u>	<u>134,356,131</u>	<u>190,336,522</u>
<b>Investing activities</b>				
Acquisition of wells, pipelines, properties, plant and equipment	(14,733,618)	(253,514,001)	(230,678,870)	(245,627,554)
Exploration costs	(331,184)	(5,698,511)	(1,593,706)	(1,438,685)
Received dividends	—	—	336,095	—
Resources from the sale on share in associates	256,713	4,417,138	—	—
Investments in associates	(2,105)	(36,214)	(3,466,447)	—
Available-for-sale financial assets	—	—	12,735,337	2,869,883
<b>Net cash flows from investing activities</b>	<u>(14,810,194)</u>	<u>(254,831,588)</u>	<u>(222,667,591)</u>	<u>(244,196,356)</u>
<b>Financing activities</b>				
Increase in equity due to Certificates of contributions	581,176	10,000,000	22,000,000	66,583,100
Decrease in equity Mexican Government contributions	—	—	(73,583,100)	(65,000,000)
Loans obtained from financial institutions	22,024,879	378,971,078	423,399,475	236,955,033
Debt payments, principal only	(11,118,986)	(191,318,841)	(207,455,492)	(191,146,091)
Interest paid	(3,646,131)	(62,737,150)	(47,248,478)	(37,133,100)
<b>Net cash flows from financing activities</b>	<u>7,840,938</u>	<u>134,915,087</u>	<u>117,112,405</u>	<u>10,258,942</u>
Net (Decrease) increase in cash and cash equivalents	(1,021,699)	(17,579,861)	28,800,945	(43,600,892)
Effects of change in cash value	520,746	8,960,213	8,441,864	5,111,720
Cash and cash equivalents at the beginning of the year	6,857,207	117,988,528	80,745,719	119,234,891
<b>Cash and cash equivalents at the end of the year (Note 6)</b>	<u>U.S. \$ 6,356,254</u>	<u>Ps. 109,368,880</u>	<u>Ps. 117,988,528</u>	<u>Ps. 80,745,719</u>

The accompanying notes are an integral part of these consolidated financial statements.

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**NOTE 1. STRUCTURE AND BUSINESS OPERATIONS OF PETRÓLEOS MEXICANOS, SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES**

Petróleos Mexicanos was created by a decree issued by the Mexican Congress on June 7, 1938. The decree was published in the *Diario Oficial de la Federación* (Official Gazette of the Federation) on July 20, 1938 and came into effect on that date.

On December 20, 2013, the *Decreto por el que se reforman y adicionan diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en Materia de Energía* (Decree that amends and supplements various provisions of the Mexican Constitution relating to energy matters), was published in the Official Gazette of the Federation and came into effect on December 21, 2013 (the "Energy Reform Decree"). In accordance with the Energy Reform Decree, the Mexican Government will carry out the exploration and extraction of hydrocarbons in the United Mexican States ("Mexico") through assignments to productive state-owned companies, as well as through agreements with productive state-owned companies and with other companies in accordance with the applicable regulatory law.

The main aspects of the Energy Reform Decree related to Petróleos Mexicanos are:

- The Mexican Government will retain ownership and control of productive state-owned companies and legislation issued pursuant to the Energy Reform Decree will contain provisions regulating the management, organization, operation, contracting procedures and other legal actions to be undertaken by these productive state-owned companies. In the case of Petróleos Mexicanos, the relevant legislation is the new *Ley de Petróleos Mexicanos* (Petróleos Mexicanos Law) described below.
- The *Comisión Reguladora de Energía* (Energy Regulatory Commission) will have the authority to grant permits to PEMEX and other companies to engage in storage, transport and distribution pipeline of oil, gas, petroleum products and petrochemicals; regulating third party access to pipeline transportation and storage of hydrocarbons and its derivatives, and the regulation of first-hand sales of such products.
- The *Comisión Nacional de Hidrocarburos* (National Hydrocarbons Commission) will have the authority to carry on biddings, assign their winners and execute the agreements related to hydrocarbons exploration and extraction as well as regulate exploration and extraction matters.

As part of the secondary legislation enacted in accordance with the Energy Reform Decree, on August 11, 2014, the *Ley de Petróleos Mexicanos* (the Petróleos Mexicanos Law) was published in the Official Gazette of the Federation. The Petróleos Mexicanos Law became effective on October 7, 2014, once the Board of Directors of Petróleos Mexicanos was designated, except for certain provisions. On December 2, 2014, once the new Board of Directors of Petróleos Mexicanos and the supervision, transparency and accountability mechanisms for Petróleos Mexicanos began operating, the Secretaría de Energía (Ministry of Energy) published in the Official Gazette of the Federation the declaration specified in Transitional Article 10<sup>th</sup> of the Petróleos Mexicanos Law, pursuant to which the special regime governing Petróleos Mexicanos' activities relating to productive state-owned subsidiaries, affiliates, compensation, assets, administrative liabilities, state dividend, budget and debt levels came into effect. On June 10, 2015 the *Disposiciones Generales de Contratación para Petróleos Mexicanos y sus Empresas Productivas Subsidiarias* (General Contracting Provisions for Petróleos Mexicanos and its productive state-owned subsidiaries) was published in the Official Gazette of the Federation and thereafter the special regime for acquisitions, leases, services and public works matters came into effect.

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The *Ley de Hidrocarburos* (Hydrocarbons Law) was published on August 11, 2014 in the Official Gazette of the Federation and became effective the day following its publication. The Hydrocarbons Law repealed the *Ley Reglamentaria del Artículo 27 Constitucional en el Ramo del Petróleo* (Regulatory Law to Article 27 of the Political Constitution of the United Mexican States Concerning Petroleum Affairs) that had been in effect prior to its publication.

Once the *Petróleos Mexicanos* Law came into effect, *Petróleos Mexicanos* was transformed from a decentralized public entity to a productive state-owned company. *Petróleos Mexicanos* is a legal entity empowered to own property and carry on business in its own name with the purpose of developing business, economic, industrial and commercial activities in order to carry out exploration and extraction of crude oil and other hydrocarbons in Mexico. In addition, *Petróleos Mexicanos* performs activities related to refining, gas processing and engineering and research projects to create economic value and increase the income of the Mexican Government, as its owner, while adhering to principles of equity and social and environmental responsibility.

In accordance with the special regime provided under the *Petróleos Mexicanos* Law, *Petróleos Mexicanos* is able to perform the activities, operations or services necessary to fulfill its purpose (i) by itself, (ii) with the support of the new productive state-owned subsidiaries and affiliates or (iii) by entering into agreements, alliances, partnerships or any other legal arrangement with Mexican or international entities in the private or public sectors.

The Subsidiary Entities, *Pemex Exploración y Producción* (Pemex Exploration and Production), *Pemex Transformación Industrial* (Pemex Industrial Transformation), *Pemex Perforación y Servicios* (Pemex Drilling and Services), *Pemex Logística* (Pemex Logistics), *Pemex Cogeneración y Servicios* (Pemex Cogeneration and Services), *Pemex Fertilizantes* (Pemex Fertilizers) and *Pemex Etileno* (Pemex Ethylene), are productive state-owned subsidiaries empowered to own property and carry on business in their own name, subject to the direction and coordination of *Petróleos Mexicanos* (the “Subsidiary Entities”).

The Subsidiary Entities of *Petróleos Mexicanos* prior to the Corporate Reorganization (defined below) were *Pemex-Exploración y Producción*, *Pemex-Refinación* (Pemex-Refining), *Pemex-Gas and Petroquímica Básica* (Pemex-Gas and Basic Petrochemicals) and *Pemex-Petroquímica* (Pemex-Petrochemicals), which were decentralized public entities with a technical, industrial and commercial nature with their own corporate identity and equity, with the legal authority to own property and conduct business in their own names, and were 100% owned by *Petróleos Mexicanos* and controlled by the Mexican Government; they had been consolidated into and had the characteristics of subsidiaries of *Petróleos Mexicanos*.

Before the secondary legislation came into effect pursuant to the Energy Reform Decree, the activities of *Petróleos Mexicanos* and its Subsidiary Entities were regulated mainly by the *Constitución Política de los Estados Unidos Mexicanos* (Mexican Constitution), the Regulatory Law to Article 27 of the Political Constitution of the United Mexican States Concerning Petroleum Affairs, the *Petróleos Mexicanos* Law published in the Official Gazette of the Federation on November 28, 2008 and the *Decreto que tiene por objeto establecer la estructura, el funcionamiento y el control de los organismos subsidiarios de Petróleos Mexicanos* (Decree to establish the structure, operation, and control of the subsidiary entities, or the “Subsidiary Entities Decree”) published in the Official Gazette of the Federation on March 21, 2012.

In accordance with Transitional Article 8<sup>th</sup> of the *Petróleos Mexicanos* Law, the Board of Directors of *Petróleos Mexicanos*, in its meeting held on November 18, 2014, approved the Corporate Reorganization (defined below) proposed by the Director General of *Petróleos Mexicanos*.

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Pursuant to the approved reorganization proposal, the existing four Subsidiary Entities were transformed into two new productive state-owned subsidiaries, which have assumed all of the rights and obligations of the existing Subsidiary Entities (the "Corporate Reorganization"). Pemex-Exploration and Production was transformed into Pemex Exploration and Production, a productive state-owned subsidiary, and Pemex-Refining, Pemex-Gas and Basic Petrochemicals and Pemex-Petrochemicals were transformed in the productive state-owned subsidiary Pemex Industrial Transformation.

The Board of Directors of Petróleos Mexicanos also approved the creation of the following new Subsidiary Entities: Pemex Drilling and Services, Pemex Logistics, Pemex Cogeneration and Services, Pemex Fertilizers and Pemex Ethylene. Each of these productive state-owned subsidiaries may be transformed into an affiliate of Petróleos Mexicanos if certain conditions set forth in the Petróleos Mexicanos Law are met.

On March 27, 2015, the Board of Directors of Petróleos Mexicanos approved the *Estatuto Orgánico de Petróleos Mexicanos* (Organic Statute of Petróleos Mexicanos) and the *acuerdos de creación* (creation resolutions) of each productive state-owned subsidiary. The Subsidiary Entities and their principal respective purposes are as follows:

- *Pemex Exploration and Production*: This entity is in charge of exploration and extraction of crude oil and solid, liquid or gaseous hydrocarbons in Mexico, in the exclusive economic zone of Mexico and abroad.
- *Pemex Industrial Transformation*: This entity performs activities related to refining, processing, import, export, trading and sale of hydrocarbons.
- *Pemex Drilling and Services*: This entity performs drilling services and repair and services of wells.
- *Pemex Logistics*: This entity provides transportation, storage and related services for crude oil, petroleum products and petrochemicals to PEMEX and other companies, through pipelines and maritime and terrestrial means, and provides guard and management services.
- *Pemex Cogeneration and Services*: This entity generates, supplies and trades electric and thermal energy, including but not limited to the energy and thermal power produced in power plants and cogeneration plants, as well as performing technical and management services related to these activities to PEMEX and other companies, by itself or through companies in which it participates directly or indirectly.
- *Pemex Fertilizers*: This entity produces, distributes and commercializes ammonia, fertilizers and its derivatives, as well as provides related services.
- *Pemex Ethylene*: This entity commercializes, distributes and trades methane, ethane and propylene, directly or through others.

The Organic Statute of Petróleos Mexicanos was published, in the Official Gazette of the Federation, on April 28, 2015 and came into effect the day following its publication.

On April 28, 2015 the creation resolutions of the seven productive state-owned subsidiaries were published in the Official Gazette of the Federation. Each creation resolution included a provision establishing that the creation resolution would come into effect once the required administrative procedures to start operations were in place and the Board of Directors of Petróleos Mexicanos issued and published a statement related to each creation resolution in the Official Gazette of the Federation.

On May 29, 2015 the statements related to the creation resolution of the productive state-owned subsidiary Pemex Exploration and Production and the productive state-owned subsidiary Pemex Cogeneration and Services issued by the Board of Directors of Petróleos Mexicanos were published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on June 1, 2015.

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On July 31, 2015, the statements related to the creation resolution of the productive state-owned subsidiary Pemex Drilling and Services, the productive state-owned subsidiary Pemex Fertilizers and the productive state-owned subsidiary Pemex Ethylene issued by the Board of Directors of Petróleos Mexicanos were published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on August 1, 2015.

On October 1, 2015, the statement related to the creation resolution of the productive state-owned subsidiary Pemex Logistics issued by the Board of Directors of Petróleos Mexicanos was published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on October 1, 2015.

On October 6, 2015, the statement related to the creation resolution of the productive state-owned subsidiary Pemex Industrial Transformation issued by the Board of Directors of Petróleos Mexicanos was published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on November 1, 2015.

As of the date of this report, all of the creation resolutions of the productive state-owned subsidiaries have come into effect.

The principal distinction between the Subsidiary Entities and the Subsidiary Companies (as defined below) is that the Subsidiary Entities are productive state-owned entities, whereas the Subsidiary Companies are affiliate companies that were formed in accordance with the applicable laws of each of the respective jurisdictions in which they were incorporated. The “Subsidiary Companies” are defined as those companies which are controlled, directly or indirectly, by Petróleos Mexicanos (see Note 3(a)).

“Associates,” as used herein, means those companies in which Petróleos Mexicanos does not have effective control (see Note 3(a)).

Petróleos Mexicanos, the Subsidiary Entities and the Subsidiary Companies are referred to collectively herein as “PEMEX.”

PEMEX’s address and its principal place of business is: Av. Marina Nacional No. 329, Col. Verónica Anzures, Delegación Miguel Hidalgo, 11300 Ciudad de México, México.

## **NOTE 2. BASIS OF PREPARATION**

### ***a. Statement of compliance***

PEMEX prepared its consolidated financial statements as of December 31, 2015 and 2014, and for the years ended December 31, 2015, 2014 and 2013, in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”).

These consolidated financial statements and the notes hereto as of December 31, 2015 were approved by the Board of Petróleos Mexicanos on April 27, 2016 with prior approval from the Audit Committee, pursuant to the terms of Article 104 Fraction III, paragraph a, of the *Ley del Mercado de Valores* (Securities Market Law), and of Article 33 Fraction I, paragraph a, section 3 and Article 78 of the *Disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado de valores* (General provisions applicable to securities’ issuers and other participants of the securities market).

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***b. Basis of measurement***

These consolidated financial statements have been prepared using the historical cost basis method, except where it is indicated that certain items have been measured using the fair value model, amortized cost or present value. The principal items measured at fair value are derivative financial instruments ("DFIs"). The principal item measured at amortized cost is debt, while the principal item measured at present value is the provision for employee benefits.

The consolidated financial statements have been prepared on a going concern basis, which assumes that PEMEX can meet its payment obligations.

For the years ended December 31, 2015 and 2014, PEMEX recognized net losses of Ps. 712,567,398 and Ps. 265,542,989, respectively, caused mainly by the decrease in international oil prices which impacted its sales and triggered the impairment of some of its assets (see Note 12(d)), and the high tax burden applicable to the industry. Additionally, as of December 31, 2015 and 2014, PEMEX had a negative equity of Ps. 1,331,675,898 and Ps. 767,720,854 respectively, which resulted in a negative working capital of Ps. 176,207,224 and Ps. 44,832,066, respectively.

PEMEX's principal use of funds in 2015 was capital expenditures, including exploration expenditures (amounting to Ps. 259,215,512), which were met primarily with cash provided by net cash flows from financing activities totaled Ps. 134,915,087. During 2015, PEMEX's net cash flow from operating activities for Ps. 102,336,640 was less than the resources needed to fund its net capital expenditures of Ps. 254,831,588. Total sales decreased by 26.5% in 2015, from Ps. 1,586,727,874 in 2014 to Ps. 1,166,362,469 in 2015. Because of the decrease in net funds from operating activities, PEMEX was forced in 2015 to rely more heavily on its financing activities. PEMEX's net cash flows from financing activities totaled Ps. 134,915,087 in 2015, as compared to net cash flows of Ps. 117,112,405 from financing activities in 2014. In addition, one of the most critical problems PEMEX faces in 2016 is its accounts payable to suppliers of Ps. 167,314,243, as of December 31, 2015.

PEMEX believes net cash flows from its operating and financing activities, including the establishment of lines of credit with certain banks and new financing schemes, will be sufficient to meet its working capital, debt service and capital expenditure requirements in 2016, due to the adjusted investment, taxation and financing plans made jointly with Mexican Government, to address declining oil prices and maintain its financial strength and flexibility.

Notwithstanding the negative results and adverse environment faced by PEMEX, PEMEX believes that the benefits from the structural changes arising from the Energy Reform described in Note 1 and the actions taken by the management are aimed at ensuring the continuity of PEMEX's operations, reducing costs, generating more revenue and operating more efficiently. PEMEX received, among other things, the following benefits from the Energy Reform:

- PEMEX maintained existing customer contracts with the possibility of extending these contracts, thereby ensuring significant revenue from the sale of products and services.
- As a result of the first bidding process for exploration and production fields (referred to as Round Zero), PEMEX retained 96% of proved reserves in the country. PEMEX also has the opportunity to participate, either by itself or jointly with any other participant, in the auction processes that will allocate the right to explore proved and possible reserves located in the remaining fields.
- The renegotiation of pension obligations resulted in a decrease in liabilities for employee benefits of Ps. 194,703,087 and in an increase in profit of Ps. 184,272,433 for the year ended December 31, 2015 (see Note 17). In addition, the Mexican Government may assume a portion of PEMEX's pension liabilities in an amount equivalent to the decrease in liabilities for employee benefits mentioned above, once that amount is reviewed by an independent expert. Any resources that PEMEX may receive from the Mexican Government arising from the Mexican Government's assumption of its pension liabilities will be used exclusively for pension liability payments. PEMEX has already received a contribution of Ps. 50,000,000 from the Mexican Government (See Note 21 (a)).
- During the years ended December 31, 2015 and 2014, PEMEX received contributions from the federal government for an amount of Ps. 60,000,000 and Ps. 22,000,000, respectively (see Note 21).

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In order to ensure compliance with its obligations and operate competitively and efficiently, PEMEX is being redefined by implementing, among other actions, the following actions:

- Reduction in the annual budget for 2016 in the amount of Ps. 100,000,000 to partially offset the decline in income and budgeted expenses without significantly affecting production targets for oil and gas.
- Identification of opportunities for joint arrangements that can generate additional income and savings in investment costs.
- Migration of existing assignments of reserves to other companies, which will improve the tax regime applicable to PEMEX.
- Adjustments to investment and financing plans, including the establishment of lines of credit with certain banks and new financing schemes (such as trusts that hold assets primarily related to the transportation and storage of hydrocarbons, commonly known as "FIBRA E").
- As of January 1, 2016, new employees receive a defined contribution plan instead of a defined benefit plan. Additionally, PEMEX will provide existing employees with the option to migrate from a defined benefit plan to a defined contribution plan.
- Sale of non-essential assets to obtain working capital.

PEMEX is not subject to the *Ley de Concursos Mercantiles* (the Bankruptcy Law) and none of PEMEX'S existing financing agreements include any clause that would lead to the demand for immediate payment of the respective debt due to having negative equity.

As a result of the foregoing factors and of the additional financial support announced by the Secretaría de Hacienda y Crédito Público (Ministry of Finance and Public Credit, or the "SHCP") on April 13, 2016, which will provide PEMEX with a total cash flow injection of Ps. 73,500,000 comprised of (1) a capital contribution of Ps. 26,500,000, which PEMEX received on April 21, 2016 (see Note 26), and (2) Ps. 47,000,000 of short-term Mexican government debt securities, which PEMEX will receive later this year in exchange for the Ps. 50,000,000 promissory note issued to PEMEX by the Mexican Government, and because, in accordance with IFRS 1, "Financial Reporting Standards" ("IFRS 1"), Management does not intend to liquidate PEMEX or to cease trading, PEMEX prepared its consolidated financial statements as of December 31, 2015 and 2014 on a going concern basis. However, PEMEX has had recurring net losses from its operations, negative working capital and negative equity, which cast significant doubt upon the entity's ability to continue as a going concern. PEMEX has disclosed the circumstances that have caused these negative trends and the actions it is taking to face them. These financial statements do not contain any adjustments that would be required if they were not prepared on a going concern basis.

***c. Functional and reporting currency and translation of foreign currency operations***

These consolidated financial statements are presented in Mexican pesos, which is both PEMEX's functional currency and reporting currency, due to the following:

- i. the economic environment in which PEMEX operates is Mexico, where the legal currency is the Mexican peso;
- ii. PEMEX is an entity owned by the Federal Government. Beginning January 1, 2015, Petróleos Mexicanos and its subsidiary entities have budgetary autonomy, subject to maintaining financial balance (the difference between income and total net spending, including the financial cost of the public debt of the Mexican Government and the entities directly controlled by the Mexican Government), the spending cap and personnel service proposed by SHCP and approved by the Mexican Congress, in Mexican pesos. Until 2014 PEMEX's budget was subject to approval by the Cámara de Diputados (Chamber of Deputies) and published in the Official Gazette in Mexican pesos.
- iii. benefits to employees were approximately 41% of PEMEX's total liabilities as of December 31, 2015 and 51% of PEMEX's total liabilities as of December 31, 2014. The reserve maintained to meet these obligations is computed, denominated and payable in Mexican pesos; and

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- iv. cash flows for payment of general expenses, taxes and duties are realized in Mexican pesos.

Although the prices of several products are based on international U.S. dollar-indices, domestic selling prices are governed by the economic and financial policies established by the Mexican Government. Accordingly, cash flows from domestic sales are generated and recorded in Mexican pesos.

Mexico's monetary policy regulator, the Banco de México, requires that Mexican Government entities other than financial entities sell their foreign currency to the Banco de México in accordance with its terms, receiving Mexican pesos in exchange, which is the legal currency in Mexico.

*Translation of financial statements of foreign operations*

The financial statements of foreign subsidiaries and associates are translated into the reporting currency by identifying if the functional currency is different from the currency for recording the foreign operations. If the currencies for a foreign transaction are different, then the currency for recording the foreign transaction is first translated into the functional currency and then translated into the reporting currency using the year-end exchange rate for assets and liabilities reported in the consolidated statements of financial position, the historical exchange rate at the date of the transaction for equity items and the weighted average exchange rate for income and expenses reported in the statement of comprehensive income of the period.

**d. Terms definition**

References in these consolidated financial statements and the related notes to "pesos" or "Ps." refers to Mexican pesos, "U.S. dollars" or "US\$" refers to dollars of the United States of America, "yen" or "¥" refers to Japanese yen, "euro" or "€" refers to the legal currency of the European Economic and Monetary Union, "Pounds sterling" or "£" refers to the legal currency of the United Kingdom, "Swiss francs" or "CHF" refers to the legal currency of the Swiss Confederation, "Canadian dollars" or "CAD" refers to the legal currency of Canada and "Australian dollars" or "AUD" refers to the legal currency of Australia. Figures in all currencies are presented in thousands of the relevant currency unit, except exchange rates and product and share prices.

**e. Convenience translations**

These consolidated financial statements are presented in Mexican pesos (reporting currency), which is the same as the recording currency and the functional currency of PEMEX. The U.S. dollar amounts shown in the consolidated statements of financial position, the consolidated statements of comprehensive income, the consolidated statements of changes in equity (deficit) and the consolidated statements of cash flows have been included solely for the convenience of the reader and are unaudited. Such amounts have been translated from amounts in pesos, as a matter of arithmetic computation only, at the exchange rate for the settlement of obligations in foreign currencies provided by Banco de México and SHCP at December 31, 2015 of Ps. 17.2065 per U.S. dollar. Translations herein should not be construed as a representation that the peso amounts have been or could be converted into U.S. dollars at the foregoing or any other rate.

**NOTE 3. SIGNIFICANT ACCOUNTING POLICIES**

The preparation of the consolidated financial statements in accordance with IFRS requires the use of estimates and assumptions made by PEMEX's management that affect the recorded amounts of assets and liabilities and the disclosures of contingent assets and liabilities as of the date of these consolidated financial statements, as well as the recorded amounts of income and expenses during the year.

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Significant estimates and underlying assumptions are reviewed on an ongoing basis, and revisions to accounting estimates are recognized in the period in which any estimates are revised and in any future periods affected by such revision.

In particular, information about assumptions, estimation uncertainties and critical accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements are described in the following notes:

- Note 3(d) Financial instruments
- Note 3(g) Wells, pipelines, properties, plant and equipment; Successful efforts method of accounting
- Note 3(i) Impairment of non-financial assets
- Note 3(k) Provisions
- Note 3(l) Employee benefits
- Note 3(m) Taxes and federal duties; deferred taxes
- Note 3(o) Contingencies

Actual results could differ from those estimates and assumptions.

Below is a summary of the principal accounting policies, which have been consistently applied to each of the years presented and followed by PEMEX in the preparation of its consolidated financial statements:

***a. Basis of consolidation***

The consolidated financial statements include those of Petróleos Mexicanos, the Subsidiary Entities and the Subsidiary Companies as defined in Note 1. All intercompany balances and transactions have been eliminated in the preparation of the consolidated financial statements pursuant to IFRS 10, "Consolidated Financial Statements" ("IFRS 10").

Unrealized gains arising from transactions with entities whose investment is accounted for using the equity method are eliminated against the investment to the extent of participation in such entities. Unrealized losses are eliminated in the same way as unrealized gains but only to the extent that there is no evidence of impairment.

***Investment in subsidiaries***

The Subsidiary Entities and Subsidiary Companies are those controlled by Petróleos Mexicanos. The Subsidiary Entities and Subsidiary Companies are consolidated from the date that control commences until the date that control ceases.

Petróleos Mexicanos controls a subsidiary when it is exposed to or has rights to variable returns from the company and has the ability to affect those returns through its power over the company.

The financial information of the Subsidiary Entities and Subsidiary Companies has been prepared based on the same period of Petróleos Mexicanos' consolidated financial statements applying the same accounting policies.

For more information about Subsidiary Companies, see Note 4.

***Permanent investments in associates and joint arrangements***

Associates are those entities in which PEMEX has significant influence but not the power to control financial and operational decisions. It is presumed that there is significant influence when PEMEX owns directly or indirectly between 20% and 50% of voting rights in another entity.

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Joint arrangements are those arrangements whereby two or more parties have joint control. A joint arrangement is either a joint operation or a joint venture. The classification of a joint arrangement as a joint operation or a joint venture depends on the rights and obligations of the parties to the arrangements. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangements. A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement.

Investments in associates and joint ventures are recognized based on the equity method and recorded initially at cost, including any goodwill identified on acquisition. With respect to joint operations, the assets, liabilities, income and expenses are recognized in relation to participation in the arrangement and in accordance with the applicable IFRS. The investment cost includes transaction costs.

These consolidated financial statements include the proportion of gains, losses and other comprehensive income corresponding to PEMEX's share in each investee, once these items are adjusted to align with the accounting policies of PEMEX, from the date that significant influence and joint control begins to the date that such influence or joint control ceases.

When the value of the share of losses exceeds the value of PEMEX's investment in an associate or joint venture, the carrying value of the investment, including any long-term investment, is reduced to zero and PEMEX ceases to recognize additional losses, except in cases where PEMEX is jointly liable for obligations incurred by those associates and/or joint ventures.

For more information about associates and joint arrangements, see Note 11.

*Non-controlling interests*

The interests of third parties who do not have a controlling interest in the equity or comprehensive result of subsidiaries of PEMEX are presented in the consolidated statements of financial position, the consolidated statements of changes in equity (deficit) as "non-controlling interests" and as "net income and comprehensive income for the period, attributable to non-controlling interests," in the consolidated statements of comprehensive income.

*Dividends paid in cash and assets other than cash*

A liability for distributions of dividends in cash and non-cash assets to third parties is recognized when the distribution is authorized by the Board of Directors. The corresponding amount is recognized directly in equity.

Distributions of non-cash assets are measured at the fair value of the assets to be distributed. Changes relating to re-measurements of the fair value between the date on which the distribution is declared and the time when the assets are transferred are recognized directly in equity.

When distributing non-cash assets, any difference between the dividend paid and the carrying amount of the assets distributed is recognized in the consolidated statements of comprehensive income.

***b. Transactions in foreign currency***

In accordance with IAS 21, "The Effects of Changes in Foreign Exchange Rates" ("IAS 21"), transactions in foreign currencies are translated to the functional currency at exchange rates at the dates of the transactions and of the presentation of financial information.

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Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous financial statements are recognized in profit or loss in the period in which they arise. When a gain or loss on a non-monetary item is recognized in other comprehensive results, any exchange component of that gain or loss is recognized in other comprehensive results. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss shall be recognized in profit or loss for the year.

***c. Fair value measurement***

PEMEX measures certain financial instruments such as DFIs at fair value as of the closing date of the relevant reporting period.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. A measurement at fair value assumes that the sale of the asset or transfer of a liability occurs:

- i. in the principal market for the asset or liability; or
- ii. in the absence of a principal market, in the most advantageous market for the asset or liability.

The principal market or the most advantageous market must be accessible for PEMEX.

The fair value of an asset or liability is measured by using the same assumptions that market participants would make when pricing the asset or liability under the premise that market participants take into account highest and best use of the asset or liability.

***d. Financial instruments***

Financial instruments are classified as: (i) financial instruments measured at fair value through profit or loss; (ii) financial instruments held to maturity; (iii) available-for-sale financial assets; (iv) investments in equity instruments; (v) loans and receivables; or (vi) DFIs. PEMEX determines the classification of its financial instruments at the time of initial recognition.

PEMEX's financial instruments include cash and short-term deposits, available-for-sale financial assets, accounts receivable, other receivables, loans, accounts payable to suppliers, other accounts payable, borrowings and debts, as well as DFIs.

Below are descriptions of the financial instruments policies employed by PEMEX:

*Financial instruments measured at fair value through profit or loss*

A financial instrument is measured at fair value through profit or loss if it is classified as held for trading or designated as such upon initial recognition. Financial assets are designated at fair value through profit or loss if PEMEX manages such investments and makes purchase and sale decisions based on their fair value in accordance with PEMEX's documented risk management or investment strategy. In addition, directly attributable transaction costs are recognized in the consolidated statements of comprehensive income for the year. These financial instruments are recognized at fair value and corresponding changes relating to dividend income are recognized in the consolidated statements of comprehensive income.

*Available-for-sale financial assets*

Available-for-sale financial assets are non-DFIs that are designated as available-for-sale or are not classified in any of the previous categories. PEMEX's investments in certain equity securities and debt securities are classified as available-for-sale financial assets. Available-for-sale financial assets are recognized initially at fair value plus any directly attributable transaction costs.

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Subsequent to initial recognition, available-for-sale financial assets are measured at fair value. In addition, any gains or losses associated with such instruments, as well as foreign exchange differences are recognized in other comprehensive result and presented in the fair value reserve in equity. When an investment is derecognized, any gains or losses accumulated in the equity are reclassified to profit or loss.

Sales and purchases of financial assets that require the delivery of such assets within a period of time established by market practice are recognized as of the negotiation date (the date on which PEMEX commits to purchase or sell the asset).

*Loans and receivables*

After initial recognition, loans and debt securities that bear interest are measured at amortized cost using the effective interest rate ("EIR") method, less impairment losses.

The amortized cost is calculated based on any discount or premium on acquisition and fees and costs that are an integral part of the EIR method. Amortization of costs is included under the heading of financing cost in the statement of comprehensive income.

*Derivative financial instruments*

DFIs presented in the consolidated statement of financial position are carried at fair value. In the case of DFIs held for trading, changes in fair value are recorded in profit or loss; in the case of DFIs formally designated as and that qualify for hedging, changes in fair value are recorded in the statement of comprehensive income using cash flow or fair value hedge accounting, with gains or losses classified in accordance with the earnings treatment of the hedge transaction.

*Embedded derivatives*

PEMEX evaluates the potential existence of embedded derivatives, which may be found in the terms of its contracts, or combined with other host contracts, which could be structured financial instruments (debt or equity instruments with embedded derivatives). Embedded derivatives have terms that implicitly or explicitly meet the characteristics of a DFI. In some instances, these embedded derivatives must be segregated from the underlying contracts and measured, recognized, presented and disclosed as DFIs, such as when the economic risks and terms of the embedded derivative are not clearly and closely related to the underlying contract.

*Impairment of financial assets*

At each reporting date, PEMEX evaluates whether there is objective evidence that a financial asset or group of financial assets is impaired, in which case the value of the recoverable amount of the asset is calculated. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of the financial asset.

Objective evidence that a financial asset or group of assets is impaired includes significant financial difficulty of the issuer or obligor, a breach of contract, such as a default or delinquency in interest or principal payments; the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider; it becoming probable that the borrower will enter bankruptcy or other financial reorganization; the disappearance of an active market for that financial asset because of financial difficulties; or observable data indicating that there is a measurable decrease in the estimated future cash flows. Impairments by asset are:

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*Impairment of financial assets carried at amortized cost*

The impairment of financial assets carried at amortized cost is measured as the difference between the assets carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The amount of the loss shall be recognized in profit or loss.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the impairment loss previously recognized shall be reversed in the income result.

*Impairment in available – for – sale financial assets*

Additionally to the above mentioned, a significant or prolonged decline in the fair value of an available – for – sale financial asset is also objective evidence of impairment.

When there is objective evidence of the impairment of an asset, the accumulated loss recognized in other comprehensive income shall be reclassified from equity to profit or loss even though the financial asset has not been derecognized.

If, in a subsequent period, the impairment loss decreases and the reduction could be objectively related to an event occurring after the impairment recognition, this impairment loss previously recognized shall be reversed in the income result.

***e. Cash and cash equivalents***

Cash and cash equivalents are comprised of cash balances on hand, deposits in bank accounts, foreign currency reserves and instruments with maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, which are used in the management of PEMEX's short-term commitments.

Cash subject to restrictions or that cannot be exchanged or used to settle a liability within twelve months is not considered part of this line item and is presented in non-current assets.

***f. Inventories and cost of sales***

PEMEX's inventories are valued at the lower of cost or net realizable value. Cost is determined based on the cost of production or acquisition of inventory and other costs incurred in transporting such inventory to its present location and in its present condition, using the average cost formula. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated selling costs. The estimate takes into consideration, among other things, the decrease in the value of inventories due to obsolescence.

Cost of sales represents the cost of production or acquisition of inventories at the time of sale, increased, where appropriate, by declines in net realizable value of inventories during the year.

Advance payment to suppliers for inventory purchases are recognized as part of inventory when the risks and benefits of the ownership of the inventory have been transferred to PEMEX.

***g. Wells, pipelines, properties, plant and equipment***

Wells, pipelines, properties, plant and equipment are recorded at acquisition or construction cost less accumulated depreciation and accumulated impairment losses.

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PEMEX uses the successful efforts method for the exploration and production of crude oil and gas activities, considering the criteria mentioned in IFRS 6, "Exploration for and Evaluation of Mineral Resources" in relation to the recognition of exploration and drilling assets. Costs of development wells and related plant, property and equipment involved in the exploitation of oil and gas are recorded as part of the cost of assets. The costs of exploratory wells in areas that have not yet been designated as containing proved reserves are recorded as intangible assets until it is determined whether they are commercially viable to capitalize as fixed assets, otherwise they are recognized as exploration expenses. Other expenditures on exploration are recognized as exploration expenses as they are incurred.

In accordance with IAS 16, "Property, Plant and Equipment" ("IAS 16"), initial costs of wells, pipelines, properties, plant and equipment are initially recorded at cost, which includes their original purchase price or construction cost, any costs attributable to bringing the assets to a working condition for their intended use and the costs of dismantling and removing the items and restoring the site on which they are located, including the estimated cost of plugging and abandoning wells.

The cost of financing projects that require large investments or financing incurred for projects, net of interest revenues from the temporary investment of these funds, is recognized as part of wells, pipelines, properties, plant and equipment when the cost is directly attributable to the construction or acquisition of a qualifying asset. The capitalization of these costs is suspended during periods in which the development of construction is interrupted, and its capitalization ends when the activities necessary for the use of the qualifying asset are substantially completed. All other financing costs are recognized in the consolidated statements of comprehensive income in the period in which they are incurred.

The cost of self-constructed assets includes the cost of materials and direct labor, interest on financing and any other costs directly attributable to start up. In some cases the cost also includes the cost of dismantling and removal.

Expenditures related to the construction of wells, pipelines, properties, plant and equipment during the stage prior to commissioning are stated at cost as intangible assets or construction in progress, in accordance with the characteristics of the asset. Once the assets are ready for use, they are transferred to the respective component of wells, pipelines, properties, plant and equipment and depreciation or amortization begins.

The costs of major maintenance or replacement of a significant component of an item of wells, pipelines, properties, plant and equipment are recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the component will flow to PEMEX and its cost can be measured reliably. The costs of recurring maintenance, repairs and renovations carried out to maintain the facilities in normal operation conditions of wells, pipelines, properties, plant and equipment are recognized in profit or loss as incurred.

Depreciation and amortization of capitalized costs in wells are determined based on the estimated economic life of the field to which the wells belong, considering the relationship between the production of barrels of oil equivalent for the year and proved developed reserves of the field, as of the beginning of the year, with quarterly updates for new development investments.

Depreciation of other elements of pipelines, properties, plant and equipment is recognized in profit or loss on a straight-line basis over the estimated useful life of the asset, beginning as of the date that the asset is available for use, or in the case of construction, from the date that the asset is completed and ready for use.

When parts of an item of wells, pipelines, properties and equipment have different useful lives than such item and a cost that is significant relative to the total cost of the item, the part is depreciated separately.

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Estimated useful lives of items of properties, plant and equipment are reviewed if expectations differ from previous estimates.

Pipelines, properties, and equipment received from customers are initially recognized at fair value as revenue from ordinary operating activities if PEMEX has no future obligations to the customer who transferred the item. In contrast, if PEMEX does have future obligations to such a customer, the initial recognition is as a deferred liability relating to the period in which the items will provide PEMEX with a service.

The capitalized value of finance leases is also included in the line item of wells, pipelines, properties, plant and equipment. Properties, plant and equipment acquired through financial leases are depreciated over the shorter of the lease term or the useful life of the asset.

Advance payments for the acquisition of pipelines, properties, plant and equipment are also recognized in the line item of wells, pipelines, properties, plant and equipment when the risks and benefits of the ownership have been transferred to PEMEX.

***h. Crude oil and natural gas reserves***

Under Mexican law, all crude oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by PEMEX. Under the Petróleos Mexicanos Law and according with applicable accounting standards, as of the date of these consolidated financial statements, the reserves assigned to PEMEX by the Mexican Government are not registered for accounting purposes. Pemex Exploration and Production estimates total proved oil and natural gas reserve volumes in accordance with Rule 4-10(a) of Regulation S-X ("Rule 4-10(a)") of the U.S. Securities and Exchange Commission ("SEC") as amended, and where necessary, in accordance with the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (the "SPE") as of February 19, 2007. These procedures are consistent with international reserves reporting practice. The estimation of these reserves depends on assumptions made and the interpretation of the data available, and may vary among analysts. The results of drilling activities, test wells and production after the date of estimation are utilized in future revisions of reserves estimates.

Although PEMEX does not own the oil and other hydrocarbon reserves within Mexico, these accounting procedures allow PEMEX to record the effects that such oil and other hydrocarbon reserves have on its consolidated financial statements, including, for example, in the depreciation and amortization line item.

***i. Impairment of non-financial assets***

The carrying amounts of PEMEX's non-financial assets, other than inventories and deferred taxes, are assessed for indicators of impairment at the end of each reporting period. If the net carrying value of the asset exceeds the recoverable amount, PEMEX records an impairment charge in its statement of comprehensive income.

A cash-generating unit is the smallest identifiable group of assets which can generate cash inflows independently from other assets or groups of assets.

The recoverable amount is defined as the higher of the fair value minus the cost of disposal and the use value. Value in use is the discounted present value of the future cash flows expected to arise from the continuing use of an asset, and from its disposal at the end of its useful life. In measuring value in use, the discount rate applied is the pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset. Fair value is calculated using discounted cash flows determined by the assumptions that market participants would apply in order to estimate the price of an asset or cash generating unit if such participants were acting in their best economic interest.

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In the case of cash-generating assets or items dedicated to the exploration and evaluation of hydrocarbons reserves, the recoverable amount is determined by adjusting the fair value, which is based on the proved reserves, for the risk factor associated with such reserves.

Both impairment losses and reversals are recognized in the statement of comprehensive income in the costs and expenses line items in which the depreciation and amortization of the relevant assets are recognized. Impairment losses may not be presented as part of the costs that have been capitalized in the value of any asset. Impairment losses related to inventories are recognized as part of cost of sales. Impairment losses on investments in associates, joint ventures and other permanent investments are recognized as profit (loss) sharing in associates.

If an impairment loss subsequently improves, and such improvement is greater than the carrying value of the asset and appears to be permanent, the impairment loss recorded previously is reversed only up to the carrying amount of the item, as though no impairment had been recognized.

*j. Leases*

The determination of whether an agreement is or contains a lease is based on the content of the agreement at the date of execution. An agreement contains a lease if performance under the agreement depends upon the use of a specific asset or assets, or if the agreement grants the right to use the asset.

Finance leases, which transfer to PEMEX substantially all the inherent benefits and risks of the leased property, are capitalized at the date the lease commences, and the value is recorded as the lower of the fair value of the leased property and the present value of the minimum lease payments. Payments on the lease are divided between the financial costs and the amortization of the remaining debt principal in order to achieve a constant interest rate for the outstanding liability. The financing costs are recognized in the statement of comprehensive income.

Operating lease payments that do not transfer to PEMEX substantially all the risks and benefits of ownership of the leased asset are recognized as expenses in the statement of comprehensive income on a straight line basis over the term of the lease. Operating lease payments that do transfer to PEMEX substantially all the risks and benefits of ownership are instead capitalized and treated as under the paragraph above (see Note 12(f)).

*k. Provisions*

PEMEX recognizes provisions when, as a result of a past event, PEMEX has incurred a present obligation for which a future disbursement is probable and the value of such disbursement is reasonably estimable. In certain cases, such amounts are recorded at their present value.

*Environmental liabilities*

In accordance with applicable legal requirements and accounting practices, an environmental liability is recognized when the cash outflows are probable and the amount is reasonably estimable. Disbursements related to the conservation of the environment that are linked to revenue from current or future operations are accounted for as costs or assets, depending on the circumstances of each disbursement. Disbursements related to past operations, which no longer contribute to current or future revenues, are accounted for as current period costs.

The accrual of a liability for a future disbursement occurs when an obligation related to environmental remediation, for which PEMEX has the information necessary to determine a reasonable estimated cost, is identified.

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*Retirement of assets*

The obligations associated with the future retirement of assets, including those related to the retirement of well, pipelines, properties, plant and equipment and their components, but excluding those related to the retirement of wells, are recognized at the date that the retirement obligation is incurred, based on the discounted cash flow method. The determination of the fair value is based on existing technology and regulations. If a reliable estimation of fair value cannot be made at the time the obligation is incurred, the accrual will be recognized when there is sufficient information to estimate the fair value.

The obligations related to the costs of future retirement of assets associated with the principal refining processes for gas and petrochemicals are not recognized. These assets are considered to have an indefinite useful life due to the potential for maintenance and repairs.

The abandonment costs related to wells currently in production and wells temporarily closed are recorded in the statement of comprehensive income based on the units of production method. Total cost of abandonment and plugging for non-producing wells is recognized in the statement of comprehensive income at the end of each period. All estimations are based on the useful lives of the wells, considering their discounted present value. Salvage values are not considered, as these values commonly have not traditionally existed.

*l. Employee benefits*

PEMEX operates a defined benefit pension plan under which it makes contributions to a fund that is administrated separately. PEMEX recognizes the cost for defined benefit plans based on independent actuarial computations applying the projected unit credit method. Actuarial gains and losses are recognized within other comprehensive result for the year in which they occur.

The costs of prior services are recognized within profit or loss for the year in which they are incurred.

PEMEX's net obligation with respect to the defined benefit plan equals the present value of the defined benefit obligation less the fair value of plan assets. The value of any asset is limited to the present value of available reimbursements and reductions in future contributions to the plan.

In addition, seniority premiums payable for disability, death and survivors benefits, medical services and gas and basic food basket for beneficiaries are recognized within other long-term employee benefits.

Termination benefits are recognized in profit or loss for the year in which they are incurred.

*m. Taxes and federal duties**Current income tax*

Current income tax assets or liabilities for the current and prior years shall be measured at the amount expected to be paid or recovered from the taxation authorities, using the tax rates that have been enacted or substantively enacted by the end of the year.

Current taxes related with items that are recognized in equity shall be presented directly in other comprehensive income. At the end of each year, Petróleos Mexicanos evaluates the regulations that are subject to interpretation and creates corresponding provisions when necessary.

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*Deferred taxes*

Deferred taxes are recorded based on the assets and liabilities method, which consists of the recognition of deferred taxes by applying tax rates applicable to the income tax to the temporary differences between the carrying value and tax values of assets and liabilities at the date of these consolidated financial statements.

Deferred tax liability shall be recognized for all taxable temporary differences, except to the extent that the deferred tax liability arises from:

- The initial recognition of goodwill or the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction, affects neither accounting profit nor taxable profit or tax loss; and
- For taxable temporary differences associated with investments in subsidiaries, branches and associates, and interest in joint arrangements, a deferred tax liability shall be recognized when the parent, investor, joint venture or joint operator is able to control the timing of reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences and the carry forward of unused tax credits and any tax losses to the extent that it is probable that taxable profit will be available against deductible temporary differences and that the carry forward of unused tax credits and unused tax losses can be utilized, unless:

- The deferred tax asset relating to deductible temporary difference arises from the initial recognition of asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither accounting profit nor taxable profit or tax loss; and
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available, against which the temporary differences can be utilized.

The carrying amount of a deferred tax asset shall be reviewed at the end of each reporting period. An entity shall reduce the carrying amount of a deferred tax asset to the extent that it is no longer probable that a sufficient taxable profit will be available to allow the benefit of that deferred tax asset to be utilized in whole or in part. Unrecognized deferred tax assets are revalued at each reporting date and will be recognized to the extent that it is probable that future taxable income will be sufficient to allow for the recovery of the deferred tax asset.

Deferred tax assets and liabilities shall be measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and deferred tax liabilities related with items that are recognized in equity shall be presented directly in other comprehensive income.

An entity shall offset deferred tax assets and deferred tax liabilities, if and only if the entity has a legally right to set off current tax assets against current tax liabilities and are levied by the same taxation authority or the same taxable entity.

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*Federal taxes and duties*

PEMEX is subject to certain special taxes and duties, which are based on the value of hydrocarbons extracted, with certain deductions and established quotas set for the time spent and surface exploration.

These taxes and duties are recognized in accordance with IAS 12, "Profit Tax" (IAS 12), when they have the characteristics of income tax, which occurs when such taxes are set by a government authority and are determined on a formula that considers the balance of income (or extraction valued at a selling price) less expenses. Taxes and duties that meet this criteria should be recognized for current and deferred income tax based on the above paragraphs. Taxes and duties that do not meet this criteria are recognized as liabilities, affecting the costs and expenses relating to the transactions that gave rise to them.

***n. Impuesto Especial sobre Producción y Servicios  
(Special Tax on Production and Services, or "IEPS Tax")***

The IEPS Tax charged to customers is a tax on domestic sales of gasoline and diesel. The applicable rates depend on, among other factors, the product, producer's price, freight costs, commissions and the region in which the respective product is sold. (See Note 20).

***o. Contingencies***

Liabilities for loss contingencies are recorded when it is probable that a liability has been incurred and the amount thereof can be reasonably estimated. When a reasonable estimation cannot be made, qualitative disclosure is provided in the notes to the consolidated financial statements. Contingent revenues, earnings or assets are not recognized until realization is assured.

***p. Revenue recognition***

Sales revenue is recognized the moment at which the risks and benefits of ownership of crude oil, refined products, natural gas, and derivative and petrochemical products are transferred to the customers who acquire them, which occurs as follows:

- in accordance with contractual terms;
- the moment at which the customer picks up product at PEMEX's facilities; or
- the moment at which PEMEX delivers the product to the delivery point.

PEMEX recognizes revenues for services at the time the collection right on such services arises.

***q. Presentation of consolidated statements of comprehensive income***

The costs and expenses shown in PEMEX's consolidated statements of comprehensive income are presented based on their function, which allows for a better understanding of the components of PEMEX's operating income. This classification allows for a comparison to the industry to which PEMEX belongs.

*Cost of sales*

Cost of sales represents the cost of inventories at the time of sale. Cost of sales includes depreciation, amortization, salaries, wages and benefits, a portion of the cost of the reserve for employee benefits and operating expenses related to the production process.

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*Other revenues, net*

Other revenues consists primarily of income received due to the “negative” IEPS Tax, other income from services, bidding terms, sanctions, penalties and franchise fees, among other types of income.

*Transportation, distribution and sale expenses*

Transportation, distribution and sale expenses are costs in connection to the storage, sale and delivery of products, such as depreciation and operating expenses associated with these activities.

*Administrative expenses*

Administrative expenses are costs related to PEMEX’s administrative personnel, which include personnel-related expenses.

*Financing income*

Financing income is comprised of interest income, financial income and other income from financial operations between PEMEX and third parties.

*Financing cost*

Financing cost is comprised of interest expenses, commissions and other expenses related to financing operations minus any portion of the financing cost that is capitalized.

*Derivative financial instruments (cost) income, net*

Derivative financial instruments (cost) income represents the net effect of the profit or loss for the year associated with DFIs (See Note 3(d)).

*Exchange (loss) gain*

Exchange rate variations relating to assets or liabilities governed by contracts denominated in foreign currencies are recorded in income of the year.

**r. Operating segments**

Operating segments are identifiable components of PEMEX that pursue business activities from which PEMEX earns revenues and incurs expenses, including those revenues and expenses from transactions with other segments of PEMEX, and for which information is available to management on a segmented basis and is assessed by the Board of Directors in order to allocate resources and assess the profitability of the segments.

**s. Non-current assets held for sale, non-current assets held for distribution to owners and discontinued operations***Non-current asset held for sale*

PEMEX classifies a non-current asset as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use, the asset is available for immediate sale and the sale is expected to be completed within one year from the date of classification, with certain exceptions.

Non-current assets classified as held for sale are measured at the lower of its carrying amount, and fair value less cost of sale is presented in a separate line item in the consolidated financial statements. Non-current assets classified as held for sale are not subject to depreciation or amortization after the classification as held for sale.

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The liabilities of a disposal group classified as held for sale shall be presented separately from other liabilities in the statement of financial position. Those assets and liabilities shall not be offset and presented as a single amount.

*Non-current asset held for distribution to owners*

When a non-current asset is classified as held for distribution to owners the assets must be available for immediate distribution in their present conditions and the distribution must be expected to be completed within one year from the date of classification, with certain exceptions.

Non-current assets classified as held for distribution are measured at the lower of its carrying amount, and fair value less cost of distribution is presented in a separate line item in the consolidated financial statements. Non-current assets classified as held for distribution are not subject to depreciation or amortization after the classification as held for distribution.

The liabilities of a disposal group classified as held for distribution to owners shall be presented separately from other liabilities in the statement of financial position. Those assets and liabilities shall not be offset and shall be presented as a single amount.

*Discontinued operations*

A discontinued operation is a component of an entity that either has been disposed of or is classified as held for sale, and either:

- represents a separate major line of business or geographical area of operations;
- is part or a single coordinated plan to dispose of a separated major line of business or geographical area of operations; or
- is a subsidiary acquired exclusively with a view to resale.

The revenue, expenses and pre-tax profit or loss of discontinued operations are only presented in a specific line item in the consolidated financial statements of comprehensive income.

*t. New accounting policies not yet adopted*

The IASB issued the new IFRS mentioned below, which are effective for each of the annual periods described below.

*Accounting changes*

The IASB issued the new IFRS mentioned below, which are applicable to PEMEX and are effective for annual periods beginning January 1, 2015:

*a) IFRS 8, "Operating Segments" ("IFRS 8")*

As part of the annual improvements to IFRS 2010-2012, the IASB published "Amendments to IFRS 8, Operating Segments (IFRS 8)."

IFRS 8 has been amended to require disclosure of the judgments made by management in aggregating operating segments. Such disclosure includes a description of the segments that have been aggregated and the economic indicators that have been assessed in determining that the aggregated segments share similar economic characteristics. Additionally, an entity must provide reconciliations of the segment assets.

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Operating segments are disclosed in Note 5.

*b) Amendments to IAS 24, "Related Party Disclosures"*

These amendments specify that the management entity providing key management personnel ("KMP") services should be identified as a related party and payments made to a management entity in respect of KMP services should be separately disclosed.

The amendments had no impact on these consolidated financial statements.

*c) Amendments to IAS 40, "Investment Property" ("IAS 40")*

The standard is amended to clarify that IAS 40 and IFRS 3 are not mutually exclusive. The guidance in IAS 40 assists preparers in distinguishing between investment property and owner-occupied property. The amendments clarify that preparers also need to refer to the guidance in IFRS 3 to determine whether the acquisition of an investment property is a business combination.

The amendments had no impact on these consolidated financial statements.

*d) Amendments to IAS 27, "Equity Method in Separate Financial Statements" ("IAS 27")*

In August 2014, the IASB issued amendments to IAS 27. These amendments to IAS 27 permit entities that use the equity method for recording investments in subsidiaries, joint ventures and associates to prepare separate financial statements.

The amendments are effective for periods beginning on or after January 1, 2016, with earlier application permitted.

PEMEX applied these amendments earlier and they had no impact on these consolidated financial statements.

***u. New IFRS not yet adopted***

The IASB issued the new IFRS mentioned below, which are effective for the annual periods described therein. PEMEX is in the process of evaluating the impact that these standards will have on its consolidated financial statements.

*Amendments that will be applicable in 2016:*

*a) Amendments to IAS 16 and IAS 38 "Intangible Assets" ("IAS 38")*

The IASB issued the amendments and new IFRS mentioned below, which are effective for the annual periods described therein. PEMEX is in the process of evaluating the impact that these standards will have on its financial statements.

The amended IAS 16 prohibits entities from using revenue-based depreciation methods for items in property, plant and equipment.

The amended IAS 38 introduces a rebuttable presumption that revenue is not an appropriate basis for amortization of an intangible asset. This presumption can only be rebutted in two limited circumstances: a) the intangible asset is expressed as a measure of revenue; or b) ordinary revenue and the life of the assets are highly associated.

The expected future reductions in selling prices could be indicative of a reduction of the future economic benefits embodied in an asset.

These amendments will be applied prospectively for annual periods beginning on or after January 1, 2016, and early application is permitted.

The amendments had no impact on these consolidated financial statements.

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*b) Amendments to IFRS 11, "Joint Arrangements" ("IFRS 11")*

The amendments to IFRS 11 address how a joint operator should account for the acquisition of an interest in a joint operation that constitutes a business. IFRS 11 now requires that such transactions be accounted for using the related principles to business combination accounting established in IFRS 3, "Business Combinations" ("IFRS 3"), and additionally requires certain related disclosures.

These amendments also apply when a business is contributed to the joint operation upon its creation. The most significant impact of the amendments to IFRS 11 will be the recognition of goodwill (when there is an excess of the transferred consideration over the identifiable net asset) and the recognition of deferred tax assets and liabilities.

These amendments will be applied prospectively for annual periods beginning on or after January 1, 2016. Early application is permitted.

The amendments had no impact on these consolidated financial statements.

*c) Amendments to IFRS 10 and IAS 28, "Investments in Associates and Joint Ventures" ("IAS 28 (2011)")*

The amendments to IFRS 10 address an identified inconsistency between the requirements of IFRS 10 and IAS 28 (2011) in the treatment of the sale or contribution of assets from an investor to an associate or joint venture.

The primary result of the amendments is that a gain or loss is recognized when such a transaction involves a business (whether or not it is a subsidiary). A gain or partial loss is recognized when the transaction involves assets that do not constitute a business, even if such assets are allocated to a subsidiary.

In December 2015, the IASB decided to defer indefinitely the effective date of this amendment. PEMEX does not expect this amendment to have impact on consolidated financial statements.

*d) Amendments to IFRS 5, "Non-Current Assets Held-for-Sale and Discontinued Operations" ("IFRS 5")*

The amendments to IFRS 5 introduce specific guidance for the reclassification of an asset from held-for-sale to held-for-distribution-to-owners (or vice versa) or the discontinuation of held-for-distribution accounting.

The amendments state that:

- Such reclassifications should not be considered changes to a plan of sale or a plan of distribution to owners and that the classification, presentation and measurement requirements applicable to the new method of disposal should be applied; and
- Assets that no longer meet the criteria for held-for-distribution-to-owners (and do not meet the criteria for held-for-sale) should be treated in the same manner as assets that cease to be classified as held-for-sale.

The amendments apply prospectively and are effective for periods beginning on or after January 1, 2016.

The amendment had no impact on these consolidated financial statements.



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*e) Amendments to IFRS 7, "Financial Instruments: Disclosures" ("IFRS 7")*

The amendments to IFRS 7 provide additional guidance to clarify whether a servicing contract constitutes continuing involvement in a transferred asset for purposes of the required disclosure relating to transferred assets.

The amendments apply retrospectively; however, to avoid the risk of hindsight affecting the determination of the required fair value disclosure, an entity is not required to apply the amendments to any period beginning prior to the annual period during which the amendments are first applied. The amendments also include an amendment to IFRS 1, "First Time Adoption of International Financial Reporting Standards."

The amendments are effective for periods beginning on or after January 1, 2016.

*Applicability of the Amendments to IFRS 7 on Offsetting Disclosure to Condensed Interim Financial Statements*

The amendments to IFRS 7 were made to eliminate uncertainty as to whether the disclosure required for offsetting financial assets and financial liabilities (introduced in December 2011 and effective for periods beginning on or after January 1, 2013) should be included in condensed interim financial statements after January 1, 2013 or only in the first year. The amendments clarify that such disclosure is not explicitly required for all interim periods. However, the disclosure may need to be included in condensed interim financial statements to comply with IAS 34.

The amendments apply retrospectively in accordance with IAS 8, "Accounting Policies, Changes in Accounting Estimates and Errors" ("IAS 8") and are effective for periods beginning on or after January 1, 2016.

The amendments had no impact on these consolidated financial statements.

*f) Amendments to IAS 19, "Employee Benefits" ("IAS 19")*

The amendments to IAS 19 clarify that investment-grade corporate bonds used to estimate the discount rate for post-employment benefits should be issued in the same currency as the benefits to be paid. These amendments also provide for the assessment of the depth of the market for investment-grade corporate bonds at the relevant currency level.

The amendments apply retrospectively in accordance with IAS 8 and are effective for periods beginning after January 1, 2016, with earlier application permitted.

The amendments had no impact on these consolidated financial statements.

*g) Amendments to IAS 34, "Interim Financial Reporting" ("IAS 34")*

The amendments to IAS 34 clarify the requirements relating to information required by IAS 34 that is presented "elsewhere in the interim financial report" but is not included in the interim financial statements. The amendments require the inclusion of a cross-reference from the interim financial statements to the location of such information in the interim financial report, which must be available to users on the same terms and at the same time as the interim financial statements.

The amendments apply retrospectively in accordance with IAS 8 and are effective for periods beginning after January 1, 2016, with earlier application permitted.

The amendments had no impact on these consolidated financial statements.

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*Amendments that will be applicable in 2017:*

*a) IAS 12 "Income Taxes: Recognition of Deferred Tax Assets for Unrealized Losses" (IAS 12)*

IASB issues amendments to IAS 12 to clarify the diversity of practices in the recognition of deferred tax assets for unrealized losses related to debt instruments measured at fair value. The amendments to IAS 12 include some explanatory paragraphs and an illustrative example.

The amendments clarify the following aspects:

- Unrealized losses on debt instruments measured at fair value for accounting purposes and measured at cost for tax purposes give rise to deductible temporary difference regardless of whether the debt instrument's holder expects to recover the carrying amount of the debt instrument by sale or by use.
- The carrying amount of an asset does not limit the estimation of probable future taxable profits.
- Estimates for future taxable profits exclude tax deductions resulting from the reversal of deductible temporary differences.
- An entity assesses a deferred tax asset in combination with other deferred tax assets. Where tax law restricts the utilization of tax losses, an entity would assess a deferred tax asset in combination with other deferred tax assets of the same type.

The amendments are to be applied retrospectively and are effective for annual periods beginning on or after 1 January 2017. Earlier application is permitted. PEMEX is in the process of evaluating the impact that these standards will have on its financial statements.

*b) Amendments to IAS 7 "Statement of Cash Flows" (IAS 7)*

The IASB issued amendments to IAS 7. The amendments are intended to clarify IAS 7 to improve information provided to user of financial statements about an entity's financing activities.

*Changes*

The amendments in IAS 7 come with the objective that entities shall provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities.

To achieve this objective, the IASB requires that the following changes in liabilities arising from financing activities are disclosed: (i) changes from financing cash flows; (ii) changes arising from obtaining or losing control of subsidiaries or other businesses; (iii) the effects of changes in foreign exchange rate; (iv) changes in fair values; and (v) other changes.

The IASB defines liabilities arising from financing activities as liabilities "for which cash flows were, or future cash flows will be, classified in the statements of cash flows as cash flows from financing activities." It also stresses that the new disclosure requirements also relate to changes in financial assets if they meet the same definition.

The amendments state that one way to fulfill the new disclosure requirements is to provide a reconciliation between the opening and closing balances in the statement of financial position for liabilities arising from financing activities.

Finally, the amendments state that changes in liabilities arising from financing activities must be disclosed separately from changes in other assets and liabilities.

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The amendments are effective for annual periods beginning on or after 1 January 2017. Earlier application is permitted. Entities need not provide comparative information when they first apply the amendments.

*Amendments effective for periods beginning in 2018:*

*a) IFRS 9, "Financial Instruments"*

The IASB issued IFRS 9 (2009) and IFRS 9 (2010), which introduced new classification and measurement requirements. In 2013, the IASB released a new model for hedge accounting. The final version of IFRS 9, which was issued in July 2014 ("IFRS 9 (2014)"), replaces the previous versions of IFRS 9 and completes the IASB's project to replace IAS 39, "Financial Instruments."

The package of improvements introduced by IFRS 9 (2014) includes a logical model for classification and measurement, a single, forward-looking "expected loss" impairment model and a substantially reformed approach to hedge accounting.

IFRS 9 (2014) is effective for annual periods beginning on or after January 1, 2018. Earlier application is permitted. Additionally, the new standards relating to credit risk may be applied early and in isolation, without adopting other modifications to the recognition of financial instruments.

*Classification and Measurement*

Classification under IFRS 9 (2014) determines how financial assets and liabilities are recognized in financial statements and, in particular, how they are measured on an ongoing basis. IFRS 9 (2014) introduces a logical approach to the classification of financial assets, which is based on the cash flow characteristics of the financial asset and the entity's business model for managing the financial assets. This principle-based approach replaces the existing classification and measurement requirements.

*Impairment*

As part of IFRS 9 (2014), the IASB introduced a new, single impairment model that is applicable to all financial instruments and eliminates the complexity associated with multiple impairment models. The new impairment model requires an entity to recognize expected credit losses on a timelier basis and to update the amount of expected losses throughout the useful life of a financial instrument. Additional disclosure is required to describe the basis for recognizing expected credit losses and any changes in the estimated amount of expected credit losses.

*Hedge Accounting*

IFRS 9 (2014) includes significant changes to hedge accounting, such as new disclosure requirements that require a description of an entity's risk management activities. The new model represents a comprehensive review of hedge accounting and aligns the accounting with risk management in order to better reflect risk management activities in the financial statements. These changes are intended to provide better disclosure about the risks that an entity faces and the impact of risk management activities on its financial information.

*Credit Risk*

IFRS 9 (2014) also aims to eliminate the volatility in financial results caused by changes in the credit risk of liabilities that are measured at fair value. Under IFRS 9 (2014), earnings from the impairment credit risk of liabilities are recognized in other comprehensive income rather than directly in profit or net loss.

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PEMEX is in the process of evaluating the impact that these standards will have on its financial statements.

*b) IFRS 15, "Revenue from Contracts with Customers" ("IFRS 15")*

IFRS 15 describes a single comprehensive model for the accounting of revenue from contracts with customers and replaces the current guidelines on revenue recognition.

The core principle of the new IFRS 15 is that an entity should recognize revenue to represent the promised transfer of goods or services to the customer, valued at the amount that the entity expects to be entitled in exchanged for those goods or services.

Pursuant to IFRS 15, an entity should:

- identify customer contracts that fall within the scope of the new standard;
- identify the separate performance obligations in the contract based on the following criteria: a) sales of goods or services, separately, b) sales that are dependent or interrelated with other products or services; and c) homogeneous and consistent sales pattern;
- determine the price of the transaction by applying the following considerations: a) variable consideration and constraining estimates of variable consideration; b) the existence of a significant financing component in the contract; c) any non-cash consideration; and d) the consideration payable to the customer;
- allocate the transaction price to each separate performance obligation; and
- recognize revenue when (or as) each performance obligation is satisfied either over time or at a point in time.

The new IFRS 15 enhances disclosures of revenue. This standard must be applied for periods beginning on or after January 1, 2018, and early application is permitted. During the year of application, entities may apply the rule retrospectively or use a modified approach.

PEMEX is in the process of evaluating the impact that these standards will have on its financial statements.

*New IFRS applicable in 2019:*

*a) IFRS 16, "Leases"*

On January 2016, the IASB published a new accounting standard, IFRS 16 Leases (IFRS 16), which replaces IAS 17 Leases and Guide interpretation.

The main changes from the previous standard are:

- IFRS 16 provides a comprehensive model for the identification of the lease arrangements and their treatment in the financial statements of both lessees and lessors;
- the new standard applies a control model to the identification of leases, distinguishing between leases and service contracts on the basis of whether there is an identified asset controlled by the customer;

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- the distinction between financial and operating leasing is removed, therefore, assets and liabilities are recognized in respect of all leases, with some exceptions for short-term leases and leases of low value assets;
- the standard does not include significant changes to the requirements for accounting by lessors.

The standard is effective for annual periods beginning on or after January 1, 2019, with earlier application permitted for entities that have also adopted IFRS 15 Revenue from Contracts with Customers. PEMEX is in the process of assessing the impact this new standard will have on its financial statements.

**NOTE 4. SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES**

As mentioned in Note 1, due to PEMEX's reorganization, as of December 31, 2015, the Subsidiary Entities consolidated in these financial statements include Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Cogeneration and Services, Pemex Drilling and Services, Pemex Logistics, Pemex Fertilizers and Pemex Ethylene.

The consolidated Subsidiary Companies are as follows:

- P.M.I. Marine, Ltd. (PMI Mar) <sup>(i)</sup>
- P.M.I. Services, B.V. (PMI SHO) <sup>(i)</sup>
- P.M.I. Holdings, B.V. (PMI HBV) <sup>(i)</sup>
- P.M.I. Trading, Ltd. (PMI Trading) <sup>(i)</sup>
- PEMEX Internacional España, S. A. (PMI SES) <sup>(i)</sup>
- P.M.I. Holdings Petróleos España, S.L. (HPE) <sup>(i)</sup>
- P.M.I. Services North América, Inc. (PMI SUS) <sup>(i)</sup>
- P.M.I. Holdings North América, Inc. (PMI HNA) <sup>(i)</sup>
- P.M.I. Norteamérica, S. A. de C. V. (PMI NASA) <sup>(i)</sup>
- P.M.I. Comercio Internacional, S. A. de C. V. (PMI CIM) <sup>(i)(ii)</sup>
- PMI Field Management Resources, S.L. (FMR) <sup>(i)</sup>
- PMI Campos Maduros SANMA, S. de R. L. de C. V. (SANMA) <sup>(i)</sup>
- Pro-Agroindustria, S. A. de C. V. (AGRO) <sup>(i)(iii)</sup>
- PMI Azufre Industrial, S. A. de C. V. (PMI AZIND) <sup>(i)(iii)</sup>
- PMI Infraestructura de Desarrollo, S. A. de C. V. (PMI ID) <sup>(i)(iii)</sup>
- PMI Cinturón Transoceánico Gas Natural, S.A. de C.V. (PMI CT) <sup>(i)(iv)</sup>
- PMI Transoceánico Gas LP, S.A. de C.V. (PMI TG) <sup>(i)(iv)</sup>
- PMI Servicios Portuarios Transoceánicos, S.A. de C.V. (PMI SP) <sup>(i)(iv)</sup>
- PMI Midstream del Centro, S.A. de C.V. (PMI MC) <sup>(i)(iv)</sup>
- Pemex Procurement International, Inc. (PPI)
- Hijos de J. Barreras, S. A. (HJ BARRERAS) <sup>(ii)</sup>
- Pemex Finance, Ltd. (FIN) <sup>(ii)</sup>
- Mex Gas Internacional, S.L. (MGAS) <sup>(v)</sup>
- Pemex Desarrollo e Inversión Inmobiliaria, S.A. de C.V. (III) <sup>(vi)</sup>
- Kot Insurance Company, AG. (KOT)
- PPQ Cadena Productiva, S.L. (PPQCP)
- III Servicios, S. A. de C. V. (III Servicios)

i. Member Company of the "PMI Group".

ii. Non-controlling interest company.

iii. As of 2014, these companies were included in the consolidated financial statements of PEMEX.

iv. As of 2015, these companies were included in the consolidated financial statements of PEMEX.

v. Formerly Mex Gas International, Ltd.

vi. Formerly Pemex Desarrollo e Inversión Inmobiliaria, S.A. de C.V.

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**NOTE 5. SEGMENT FINANCIAL INFORMATION**

PEMEX's primary business is the exploration and production of crude oil and natural gas and the refining and marketing of petroleum products, which prior to the Corporate Reorganization was conducted through six business segments: exploration and production, refining, gas and basic petrochemicals, petrochemicals, the Trading Companies (as defined below) and Corporate and Other Subsidiary Companies. After the Corporate Reorganization PEMEX's operations are now conducted through eleven business segments: exploration and production, refining, gas and basic petrochemicals, petrochemicals, cogeneration, drilling and services, logistics, ethylene, fertilizers, the Trading Companies and Corporate and Other Subsidiary Companies.

In this Note 5, for the year ended December 31, 2015, PEMEX (a) presents, for comparison purposes, its business segments in accordance with the business segments it utilized before the Corporate Reorganization in accordance with IFRS 8, "Operating Segments" ("IFRS 8") and (b) its business segments in accordance with the manner in which it now defines its business segments following the Corporate Reorganization.

In each case, due to PEMEX's structure, there are significant quantities of inter-segment sales among the reporting segments, which are made at internal transfer prices established by PEMEX reflecting international market prices. The primary sources of revenue for PEMEX's business segments following the Corporate Reorganization are as described below:

- The exploration and production segment earns revenues from sales of domestic crude oil and natural gas, and from exporting crude oil through the Trading Companies. Export sales are made through PMI CIM to approximately 26 major customers in various foreign markets. Approximately half of PEMEX's crude oil is sold to Pemex Industrial Transformation to supply the refining segment.
- The refining segment earns revenues from sales of refined petroleum products and derivatives, mainly to third parties within the domestic market. Pemex Industrial Transformation sells a significant portion of the fuel oil produced to the *Comisión Federal de Electricidad* (Federal Electricity Commission, or "CFE") and a significant portion of jet fuel produced to *Aeropuertos y Servicios Auxiliares* (the Airports and Auxiliary Services Agency). The refining segment's most important products are different types of gasoline.
- The gas and basic petrochemicals segment earns revenues primarily from domestic sources. The gas and basic petrochemicals segment also consumes high levels of its own natural gas production. Most revenues generated by the gas and basic petrochemicals segment are obtained from the sale of natural gas, liquefied petroleum gas, naphtha, butane and ethane.
- The petrochemicals segment is engaged in the sale of petrochemical products to the domestic market, offering a wide range of products. The majority of the revenues generated by the petrochemicals segment comes from the production and sale of methane derivatives, ethane derivatives and aromatics and derivatives.
- The cogeneration segment receives income from the cogeneration, supply and sale of electricity and thermal energy; it also provides technical and management activities associated with these services.
- The drilling segment receives income from drilling services, and wells repair and services.
- The logistics segment, operated by Pemex Logistics, earns income from transportation, storage and related services of crude oil, petroleum products and petrochemicals, through strategies such as pipelines and maritime and terrestrial resources, and from the provision of services related to the maintenance and handling of the products and guard and management services.

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- The ethylene segment earns revenues from the distribution and trade of methane, ethane and propylene in the domestic market.
- The fertilizers segment earns revenues from trading ammonia, fertilizers and its derivatives, mostly in the domestic market.
- The trading companies segment, which consist of PMI NASA, PMI CIM, MGAS and PMI Trading (the “Trading Companies”), earn revenues from trading crude oil, natural gas and petroleum and petrochemical products within international markets.
- The segment related to corporate and other Subsidiary Companies provides administrative, financing, consulting and logistical services, as well as economic, tax and legal advice to PEMEX’s entities and companies.

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The following tables present the condensed financial information of these segments, after elimination of unrealized intersegment gain (loss). These reporting segments are those which PEMEX's management evaluates in its analysis of PEMEX.

As of/for the year ended December 31, 2015	Exploration and Production <sup>(i)(v)</sup>	Refining <sup>(ii)(vi)(vii)</sup>	Gas and Basic Petrochemicals <sup>(iii)(vii)(viii)</sup>	Petrochemicals <sup>(iv)(vii)(ix)</sup>	Cogeneration and Services <sup>(iii)(viii)</sup>	Drilling and Services <sup>(v)(v)</sup>	Logistics <sup>(ii)(iii)</sup> (iv)(vii)	Fertilizers <sup>(ii)</sup> (iii)(iv)(vii)	Ethylene <sup>(ii)</sup> (iv)(ix)	Trading Companies	Corporate and Other Subsidiary Companies	Intersegment eliminations	Total
Sales:													
Trade	Ps. —	Ps. 585,025,139	Ps. 135,519,426	Ps. 19,645,455	Ps. —	Ps. —	Ps. —	Ps. 1,494,478	Ps. 4,551,413	Ps. 407,214,446	Ps. —	Ps. —	Ps. 1,153,450,357
Intersegment	690,642,133	54,876,237	55,594,042	15,823,916	—	1,511,970	598,853	209,970	473,990	353,137,149	18,296,515	(1,191,164,775)	—
Services income	—	4,523,258	1,936,343	1,089,460	—	—	10,355,988	236	17,893	661,683	5,107,109	(10,779,858)	12,912,112
Impairment of wells, pipelines, properties, plant and equipment	394,396,580	75,724,859	325,200	392,020	—	—	5,829,519	—	1,276,512	—	—	—	477,944,690
Benefit of the period of employee benefits	(46,368,308)	(28,783,761)	(8,505,427)	(8,519,593)	—	—	—	—	—	—	—	—	(92,177,089)
Cost of sales	427,158,621	660,199,710	181,608,577	34,723,657	2,793	706,896	10,727,462	1,707,548	4,965,414	749,655,199	5,895,648	(1,182,282,621)	895,068,904
Gross income (loss)	(84,544,760)	(62,716,174)	19,621,461	9,962,747	(2,793)	805,074	(5,602,140)	(2,864)	(1,198,630)	11,358,079	17,507,976	(19,662,012)	(114,474,036)
Other revenues and expenses, net	(7,957,202)	1,078,443	778,891	(614,294)	—	38	26,941	14,680	19,909	1,666,783	721,759	1,890,786	(2,373,266)
Transportation, distribution and sales expenses	—	30,528,279	3,984,339	779,909	1,448	—	3,009	4,416	62,071	428,613	254	(6,863,699)	28,928,639
Administrative expenses	18,454,281	26,980,060	5,590,504	7,959,023	47,670	8,553	104,794	152,404	519,351	1,967,581	61,609,813	(10,921,939)	112,472,095
Benefit of the period of employee benefits in general expenses	(17,853,725)	(25,118,413)	(7,422,339)	(7,434,698)	—	—	—	—	—	—	(46,031,780)	—	(103,860,955)
Operating income (loss)	(93,102,518)	(94,027,657)	18,247,848	8,044,219	(51,911)	796,559	(5,683,002)	(145,004)	(1,760,143)	10,628,668	2,651,448	14,412	(154,387,081)
Financing income	25,852,078	111,077	2,632,152	46,306	—	43,690	37	3,503	7,728	1,147,870	110,816,691	(125,670,273)	14,990,859
Financing cost	(90,822,360)	(12,012,682)	(1,463,782)	(261,640)	2,110	(95,280)	(61,153)	—	—	(1,299,580)	(87,289,616)	125,530,390	(67,773,593)
Derivative financial instruments (cost) income, net	—	—	6,463	—	—	—	—	—	—	1,347,323	(22,803,663)	—	(21,449,877)
Exchange loss, net	(132,165,427)	(7,218,302)	(129,537)	(16,647)	(7,509)	(92,046)	(11,090)	(3,600)	(2,802)	(49,190)	(15,069,424)	—	(154,765,574)
(Loss) profit sharing in associates	(473,082)	—	671,868	—	—	—	—	—	—	2,056,259	(749,900,890)	749,963,960	2,318,115
Taxes, duties and other	376,682,705	—	1,839,021	—	—	197,491	(2,069,848)	—	—	5,134,176	(50,283,298)	—	331,500,247
Net (loss) income	(667,394,014)	(113,147,564)	18,125,991	7,812,238	(57,310)	455,432	(3,685,360)	(145,101)	(1,755,217)	8,697,174	(711,312,156)	749,838,489	(712,567,398)
Total current assets	709,252,019	72,345,772	104,027,317	137,428,541	655,239	2,171,717	49,162,929	1,594,643	4,988,511	73,116,155	275,582,816	(1,163,125,162)	267,200,497
Permanent investments in associates	919,654	—	6,687,977	—	—	—	—	8,500	—	11,845,489	(242,233,405)	246,937,384	24,165,599
Wells, pipelines, properties, plant and equipment, net	966,144,619	178,133,087	55,343,838	12,986,144	—	22,647,454	58,078,603	7,405,969	18,480,684	3,045,704	22,217,529	—	1,344,483,631
Total assets	1,698,909,241	250,664,777	166,128,881	150,692,920	655,239	24,917,981	111,307,038	9,034,375	23,705,119	93,266,620	1,443,189,883	(2,196,817,874)	1,775,654,200
Total current liabilities	278,507,394	44,457,570	23,921,503	36,190,769	469,524	1,981,652	14,698,159	1,486,468	4,534,980	34,749,438	1,157,183,570	(1,154,773,306)	443,407,721
Long-term debt	1,252,239,594	15,675,890	810,350	220,765	—	12,031,849	4,850,905	—	—	3,607,840	1,285,676,066	(1,274,240,092)	1,300,873,167
Employee benefits	379,150,943	395,819,390	96,358,257	117,314,976	61,171	417,817	368,036	—	3,611	(59,581)	289,938,288	—	1,279,385,441
Total liabilities	1,985,557,185	459,367,276	121,966,591	153,946,693	530,696	14,431,318	19,917,100	1,499,001	4,538,591	41,420,792	2,747,910,113	(2,443,755,258)	3,107,330,098
Equity (deficit)	(286,647,945)	(208,702,499)	44,162,291	(3,253,773)	124,544	10,486,663	91,389,938	7,535,375	19,166,527	51,845,828	(1,304,720,228)	246,937,381	(1,331,675,898)
Depreciation and amortization	144,567,149	11,608,150	7,096,026	2,212,620	—	612,741	337,364	158,505	442,504	84,493	831,698	—	167,951,250
Net periodic cost of employee benefits	23,608,485	12,266,483	5,555,775	3,570,342	(298)	—	(310)	—	—	(119,819)	17,668,484	—	62,549,142
Acquisition of wells, pipelines, properties, plant and equipment	184,786,051	59,079,004	4,981,618	4,875,219	—	—	1,544,224	320,762	1,882,108	677,314	6,711,511	—	264,857,811

- (i) Due to the Corporate Reorganization, certain business units that were operated by the exploration and production segment were transferred to the drilling and services segment upon the formation of Pemex Drilling and Services on August 1, 2015. The results for the exploration and production segment for the year ended and as of December 31, 2015 include the results for these business units for the first seven months of 2015, prior to such transfers.
- (ii) Due to the Corporate Reorganization, certain business units that were operated by the gas and basic petrochemicals segment were transferred to the cogeneration and services segment upon the formation of Pemex Cogeneration and Services on June 1, 2015, to the fertilizers segment upon the formation of Pemex Fertilizers on August 1, 2015 and to the logistics segment upon the formation of Pemex Logistics on October 1, 2015. The results for the gas and basic petrochemicals segment for the year ended and as of December 31, 2015 include the results for these business units for the first five, seven and nine months of 2015, respectively, prior to such transfers.
- (iii) Due to the Corporate Reorganization, certain business units that were operated by the gas and basic petrochemicals segment were transferred to the cogeneration and services segment upon the formation of Pemex Cogeneration and Services on June 1, 2015, to the fertilizers segment upon the formation of Pemex Fertilizers on August 1, 2015 and to the logistics segment upon the formation of Pemex Logistics on October 1, 2015. The results for the gas and basic petrochemicals segment for the year ended and as of December 31, 2015 include the results for these business units for the first five, seven and nine months of 2015, respectively, prior to such transfers.
- (iv) Due to the Corporate Reorganization, certain business units that were operated by the petrochemicals segment were transferred to the ethylene segment upon the formation of Pemex Ethylene on August 1, 2015, to the fertilizers segment upon the formation of Pemex Fertilizers on August 1, 2015 and to the logistics segment upon the formation of Pemex Logistics on October 1, 2015. The results for the petrochemicals segment for the year ended and as of December 31, 2015 include the results for these business units for the first seven, seven and nine months of 2015, respectively, prior to such transfers.
- (v) Due to the Corporate Reorganization, certain business units that were operated by the exploration and production segment were transferred to the drilling and services segment upon the formation of Pemex Drilling and Services on August 1, 2015. The results for the drilling and services segment for the year ended and as of December 31, 2015 include the results for these business units for the last five months of 2015, after such transfers.
- (vi) Due to the Corporate Reorganization, certain business units that were operated by the exploration and production segment, by the gas and basic petrochemicals segment and by the petrochemicals segment were transferred to the logistics segment upon the formation of Pemex Logistics on October 1, 2015. The results for the logistics segment for the year ended and as of December 31, 2015 include the results for these business units for the last three months of 2015, respectively, after such transfers.

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- (vii) Due to the Corporate Reorganization, certain business units that were operated by the refining segment, by the gas and basic petrochemicals segment and by the petrochemicals segment were transferred to the fertilizers segment upon the formation of Pemex Fertilizers on August 1, 2015. The results for the fertilizers segment for the year ended and as of December 31, 2015 include the results for these business units for the last five months of 2015, respectively, after such transfers.
- (viii) Due to the Corporate Reorganization, certain business units that were operated by gas and basic petrochemicals segment were transferred to the cogeneration and services segment upon the formation of Pemex Cogeneration and Services on June 1, 2015. The results for the cogeneration and services segment for the year ended and as of December 31, 2015 include the results for these business units for the last seven months of 2015, after such transfers.
- (ix) Due to the Corporate Reorganization, certain business units that were operated by petrochemicals segment were transferred to the ethylene segment upon the formation of Pemex Ethylene on August 1, 2015. The results for the ethylene segment for the year ended and as of December 31, 2015 include the results for these business units for the last five months of 2015, after such transfers.

As of/for the year ended December 31, 2015	Exploration and Production	Refining	Gas and Basic Petrochemicals	Petrochemicals	Trading Companies	Corporate and Other Subsidiary Companies	Intersegment eliminations	Total
Sales:								
Trade	Ps. —	Ps. 585,025,139	Ps. 135,519,426	Ps. 25,691,347	Ps. 407,214,445	Ps. —	Ps. —	Ps. 1,153,450,357
Intersegment	692,154,103	55,475,090	55,594,042	16,507,876	353,137,149	18,296,515	(1,191,164,775)	—
Services income	—	14,879,246	1,936,343	1,107,589	661,683	5,107,109	(10,779,858)	12,912,112
Impairment of wells, pipelines, properties, plant and equipment	394,396,580	81,554,379	325,200	1,668,531	—	—	—	477,944,690
Benefit of the period of employee benefits	(46,368,308)	(28,783,761)	(8,505,427)	(8,519,593)	—	—	—	(92,177,089)
Cost of sales	427,865,517	670,927,172	181,611,370	41,396,621	749,655,199	5,895,648	(1,182,282,621)	895,068,904
Gross income (loss)	(83,739,686)	(68,318,315)	19,618,668	8,761,255	11,358,078	17,507,976	(19,662,012)	(114,474,036)
Other revenues and expenses, net	(7,957,164)	1,105,384	778,891	(579,704)	1,666,783	721,759	1,890,785	(2,373,266)
Transportation, distribution and sales expenses	—	27,599,553	5,271,355	2,492,563	428,613	254	(6,863,699)	28,928,639
Administrative expenses	18,462,834	30,016,589	4,352,606	6,984,612	1,967,581	61,609,813	(10,921,940)	112,472,095
Benefit of the period of employee benefits in general expenses	(17,853,725)	(25,118,413)	(7,422,339)	(7,434,698)	—	(46,031,780)	—	(103,860,955)
Operating income (loss)	(92,305,959)	(99,710,660)	18,195,937	6,139,074	10,628,667	2,651,448	14,412	(154,387,081)
Financing income	25,895,768	111,114	2,632,152	57,537	1,147,870	110,816,691	(125,670,273)	14,990,859
Financing cost	(90,917,640)	(12,073,835)	(1,461,672)	(261,640)	(1,299,580)	(87,289,616)	125,530,390	(67,773,593)
Derivative financial instruments (cost) income, net	—	—	6,463	—	1,347,323	(22,803,663)	—	(21,449,877)
Exchange loss, net	(132,257,473)	(7,229,392)	(137,046)	(23,049)	(49,190)	(15,069,424)	—	(154,765,574)
(Loss) profit sharing in associates	(473,082)	—	671,868	—	2,056,259	(749,900,890)	749,963,960	2,318,115
Taxes, duties and other	376,880,196	(2,069,848)	1,839,021	—	5,134,176	(50,283,298)	—	331,500,247
Net (loss) income	(666,938,582)	(116,832,925)	18,068,681	5,911,922	8,697,173	(711,312,156)	749,838,489	(712,567,398)
Total current assets	711,423,736	121,508,701	104,682,556	144,011,695	73,116,155	275,582,816	(1,163,125,162)	267,200,497
Permanent investments in associates	919,654	—	6,687,977	8,500	11,845,489	(242,233,405)	246,937,384	24,165,599
Wells, pipelines, properties, plant and equipment, net	988,792,073	202,997,928	88,557,600	38,872,797	3,045,704	22,217,529	—	1,344,483,631
Total assets	1,723,827,222	328,758,053	199,997,882	183,432,414	93,266,620	1,443,189,883	(2,196,817,874)	1,775,654,200
Total current liabilities	280,489,046	59,155,729	24,391,027	42,212,217	34,749,438	1,157,183,570	(1,154,773,306)	443,407,721
Long-term debt	1,264,271,443	20,526,795	810,350	220,765	3,607,840	1,285,676,066	(1,274,240,092)	1,300,873,167
Employee benefits	379,568,760	396,187,426	96,419,428	117,331,120	(59,581)	289,938,288	—	1,279,385,441
Total liabilities	1,999,988,503	479,284,376	122,497,287	159,984,285	41,420,792	2,747,910,113	(2,443,755,258)	3,107,330,098
Equity (deficit), net	(276,161,282)	(150,526,323)	77,500,597	23,448,129	51,845,828	(1,304,720,228)	246,937,382	(1,331,675,897)
Depreciation and amortization	145,179,890	11,945,514	7,096,026	2,813,629	84,493	831,698	—	167,951,250
Net periodic cost of employee benefits	23,608,485	12,266,173	5,555,477	3,570,342	(119,819)	17,668,484	—	62,549,142
Acquisition of wells, pipelines, properties, plant and equipment	184,786,051	60,623,228	4,981,618	7,078,089	677,314	6,711,511	—	264,857,811

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
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As of / for the year ended December 31, 2014	Exploration and Production	Refining	Gas and Basic Petrochemicals	Petrochemicals	Trading Companies	Corporate and Other Subsidiary Companies	Intersegment eliminations	Total
Sales:								
Trade	Ps. —	Ps. 758,988,560	Ps. 157,715,607	Ps. 28,293,812	Ps. 630,291,313	Ps. —	Ps. —	Ps. 1,575,289,292
Intersegment	1,134,519,972	78,453,236	84,198,317	15,181,899	433,732,307	65,377,209	(1,811,462,940)	—
Services income	—	4,016,699	2,038,629	779,978	777,160	4,743,987	(917,871)	11,438,582
Impairment of wells, pipelines, properties, plant and equipment	21,199,705	—	—	1,445,991	—	—	—	22,645,696
Cost of sales	336,376,922	916,867,969	238,920,142	46,215,742	1,059,616,060	3,730,490	(1,759,092,541)	842,634,784
Gross income (loss)	776,943,345	(75,409,474)	5,032,411	(3,406,044)	5,184,720	66,390,706	(53,288,270)	721,447,394
Other revenues and expenses, net	(3,190,604)	39,332,749	376,111	(361,504)	643,043	1,011,199	(258,597)	37,552,397
Transportation, distribution and sales expenses	—	31,071,231	3,024,325	1,061,157	493,651	468	(3,468,166)	32,182,666
Administrative expenses	43,131,979	31,941,961	11,038,955	14,107,044	1,806,000	59,442,914	(50,131,739)	111,337,114
Operating income (loss)	730,620,762	(99,089,917)	(8,654,758)	(18,935,749)	3,528,112	7,958,523	53,038	615,480,011
Financing income	14,784,998	258,069	2,653,747	142,115	1,157,820	87,371,829	(103,354,391)	3,014,187
Financing cost	(74,492,786)	(9,917,204)	(346,660)	(72,354)	(1,068,869)	(69,026,534)	103,365,347	(51,559,060)
Derivative financial instruments (cost) income, net	—	—	8,116	—	4,652,123	(14,098,809)	—	(9,438,570)
Exchange loss, net	(63,865,750)	(5,077,441)	(132,849)	(29,136)	(96,785)	(7,797,200)	—	(76,999,161)
Profit (loss) sharing in associates	203,285	—	284,080	—	(247,303)	(263,425,082)	263,219,388	34,368
Taxes, duties and other	760,627,534	—	(21,772,116)	—	3,839,908	3,379,438	—	746,074,764
Net (loss) income	(153,377,025)	(113,826,493)	15,583,792	(18,895,124)	4,085,190	(262,396,711)	263,283,382	(265,542,989)
Total current assets	579,201,519	255,407,423	105,121,847	68,242,701	83,345,895	505,949,689	(1,307,941,793)	289,327,281
Permanent investments in associates	1,392,737	488,499	5,059,612	—	8,483,563	67,164,220	(60,573,871)	22,014,760
Wells, pipelines, properties, plant and equipment, net	1,347,194,064	277,719,686	99,635,112	38,928,597	2,421,141	17,475,538	—	1,783,374,138
Total assets	1,953,828,467	535,094,903	210,625,967	108,444,584	102,955,361	1,580,484,899	(2,363,065,901)	2,128,368,280
Total current liabilities	206,711,128	330,308,600	31,965,537	8,229,852	57,265,930	1,000,368,240	(1,300,689,940)	334,159,347
Long-term debt	963,274,628	23,142,209	1,117,618	191,070	3,588,666	986,026,128	(979,956,033)	997,384,286
Employee benefits	448,887,587	463,143,546	110,913,462	139,554,046	641,279	310,948,608	—	1,474,088,528
Total liabilities	1,694,872,519	828,576,773	145,190,535	148,149,492	67,266,726	2,314,525,120	(2,302,492,031)	2,896,089,134
Equity (deficit), net	258,955,948	(293,481,870)	65,435,432	(39,704,908)	35,688,635	(734,040,221)	(60,573,870)	(767,720,854)
Depreciation and amortization	121,034,025	11,435,739	7,039,030	2,685,896	80,990	799,107	—	143,074,787
Net periodic cost of employee benefits	37,582,742	38,198,504	9,338,059	11,512,589	177,003	24,914,431	—	121,723,328
Acquisition of wells, pipelines, properties, plant and equipment	174,019,012	39,087,896	5,632,770	4,709,838	2,545,075	8,007,600	—	234,002,191

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As of / for the year ended December 31, 2013	Exploration and Production	Refining	Gas and Basic Petrochemicals	Petrochemicals	Trading Companies	Corporate and Other Subsidiary Companies	Intersegment eliminations	Total
Sales:								
Trade	Ps. —	Ps. 740,371,929	Ps. 143,290,615	Ps. 26,525,091	Ps. 687,677,633	Ps. —	Ps. —	Ps. 1,597,865,268
Intersegment	1,250,771,663	74,893,930	73,998,380	13,840,212	407,663,967	56,136,413	(1,877,304,565)	—
Services income	—	4,125,144	2,180,256	—	786,596	4,432,211	(1,184,850)	10,339,357
Impairment of wells, pipelines, properties, plant and equipment	26,364,717	—	—	—	(755,882)	—	—	25,608,835
Cost of sales	338,550,003	963,816,046	205,190,171	42,372,594	1,080,269,817	5,288,105	(1,821,480,398)	814,006,338
Gross income (loss)	885,856,943	(144,425,043)	14,279,080	(2,007,291)	16,614,261	55,280,519	(57,009,017)	768,589,452
Other revenues and expenses, net	(842,289)	97,387,329	1,142,830	347,081	(6,525,139)	(1,082,910)	(291,217)	90,135,685
Transportation, distribution and sales expenses	—	28,989,721	2,623,144	880,839	395,725	(35)	(440,958)	32,448,436
Administrative expenses	42,809,551	32,927,261	11,352,890	12,706,033	1,789,969	54,012,586	(56,943,818)	98,654,472
Operating income (loss)	842,205,103	(108,954,696)	1,445,876	(15,247,082)	7,903,428	185,058	84,542	727,622,229
Financing income	24,936,100	289,978	3,403,910	382,930	1,092,642	68,541,251	(89,911,112)	8,735,699
Financing cost	(48,381,896)	(15,049,203)	(246,075)	(67,170)	(1,237,519)	(64,390,791)	89,786,170	(39,586,484)
Derivative financial instruments (cost) income, net	—	—	(33,305)	—	(232,801)	1,577,079	—	1,310,973
Exchange (loss) gain	(4,071,119)	699,215	(69,484)	17,082	(44,828)	(482,358)	—	(3,951,492)
Profit (loss) sharing in associates	207,132	—	933,927	—	(577,434)	(173,785,799)	173,928,884	706,710
Taxes, duties and other	856,978,971	—	1,525,410	21,349	3,930,748	2,439,584	—	864,896,062
Net (loss) income	(42,083,651)	(123,014,706)	3,909,439	(14,935,589)	2,972,740	(170,795,144)	173,888,484	(170,058,427)
Depreciation and amortization	127,029,321	10,780,711	7,060,955	2,563,482	9,321	1,050,068	(2,154)	148,491,704
Net periodic cost of employee benefits	36,532,518	37,401,828	8,837,963	11,112,176	204,268	21,250,936	—	115,339,689

PEMEX's management measures the performance of the segments based on operating income and net segment income before elimination of unrealized intersegment gain (loss), as well as by analyzing the impact of the results of each segment in the consolidated financial statements. For certain of the items in these consolidated financial statements to agree with the individual financial statements of the operating segments, they must be reconciled. The tables below present the financial information of PEMEX's operating segments, before intersegment eliminations:

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
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The following tables present accounting conciliations between individual and consolidated information.

As of/for the year ended December 31, 2015	Exploration and Production (ii)(v)	Refining (ii)(vi)(vii)	Gas and Basic Petrochemicals (iii)(vi)(vii)(viii)	Petrochemicals (iv)(vi)(vii)(ix)	Cogeneration and Services (iii)(viii)	Drilling and Services <sup>(i)(v)</sup>	Logistics (ii)(iii)(iv)(vi)	Fertilizers (ii)(iii)(iv)(vii)	Ethylene (iv)(ix)	Trading Companies	Corporate and Other Subsidiary Companies
<b>Sales:</b>											
By segment	Ps. 690,642,133	Ps. 645,018,456	Ps. 193,053,201	Ps. 36,558,831	Ps. —	Ps. 1,511,970	Ps. 10,954,841	Ps. 1,704,685	Ps. 5,048,600	Ps. 761,213,474	Ps. 23,403,624
Less unrealized intersegment sales	—	(593,821)	(3,391)	—	—	—	—	—	(5,304)	(200,197)	—
<b>Total consolidated sales</b>	<b>690,642,133</b>	<b>644,424,635</b>	<b>193,049,810</b>	<b>36,558,831</b>	<b>—</b>	<b>1,511,970</b>	<b>10,954,841</b>	<b>1,704,685</b>	<b>5,043,295</b>	<b>761,013,277</b>	<b>23,403,624</b>
<b>Operating income (loss):</b>											
By segment	(89,473,302)	(112,781,875)	17,209,675	6,752,641	(51,911)	700,748	(6,875,253)	(262,144,145)	(2,288,746)	10,334,137	2,651,448
Less unrealized intersegment sales	—	(593,821)	(3,391)	—	—	—	—	—	(5,304)	(200,197)	—
Less unrealized gain due to production cost valuation of inventory	(251,995)	19,348,039	1,041,564	1,291,577	—	—	—	—	2,163	494,727	—
Less capitalized refined products	(3,496,201)	—	—	—	—	—	—	—	—	—	—
Less amortization of capitalized interest	118,980	—	—	—	—	—	—	—	—	—	—
Less depreciation of revaluated assets	—	—	—	—	—	95,811	1,192,250	117,142,141	531,745	—	—
<b>Total consolidated operating income (loss)</b>	<b>(93,102,518)</b>	<b>(94,027,657)</b>	<b>18,247,848</b>	<b>8,044,218</b>	<b>(51,911)</b>	<b>796,559</b>	<b>(5,683,003)</b>	<b>(145,002,004)</b>	<b>(1,760,142)</b>	<b>10,628,667</b>	<b>2,651,448</b>
<b>Net income (loss):</b>											
By segment	(663,719,120)	(131,901,782)	17,702,787	7,034,734	(57,311,310)	359,621	(4,877,612)	(262,242)	(2,314,773)	8,402,644	(711,312,156)
Less unrealized intersegment sales	—	(593,821)	(3,391)	—	—	—	—	—	(5,304)	(200,197)	—
Less unrealized gain due to production cost valuation of inventory	(251,995)	19,348,039	1,041,564	1,291,577	—	—	—	—	2,163	494,727	—
Less capitalized refined products	(3,496,201)	—	—	—	—	—	—	—	—	—	—
Less equity method elimination	(45,679)	—	(614,969)	(514,073)	—	—	—	—	30,953	—	—
Less equity method for unrealized profits	118,980	—	—	—	—	—	—	—	—	—	—
Less depreciation of revaluated assets	—	—	—	—	—	95,811	1,192,250	117,141	531,745	—	—
<b>Total consolidated net income (loss)</b>	<b>(667,394,014)</b>	<b>(113,147,564)</b>	<b>18,125,991</b>	<b>7,812,238</b>	<b>(57,311,310)</b>	<b>455,432</b>	<b>(3,685,362)</b>	<b>(145,101)</b>	<b>(1,755,216)</b>	<b>8,697,174</b>	<b>(711,312,156)</b>
<b>Assets:</b>											
By segment	1,722,396,076	278,046,553	170,326,716	151,474,777	655,239	28,875,231	247,480,984	15,166,562	45,951,979	98,305,072	1,443,189,883
Less unrealized intersegment sales	1,132	(3,477,744)	(22,723)	(2,435)	—	—	—	—	(5,304)	(293,536)	—
Less unrealized gain due to production cost valuation of inventory	(19,699,526)	(23,904,032)	(581,492)	(779,423)	—	—	—	—	2,163	(4,744,915)	—
Less capitalized refined products	(3,496,201)	—	—	—	—	—	—	—	—	—	—
Less equity method for unrealized profits	(411,221)	—	(3,593,620)	—	—	—	—	—	(3,952,754)	—	—
Less amortization of capitalized interest	118,981	—	—	—	—	—	—	—	—	—	—
Less market value of fixed assets elimination	—	—	—	—	—	(3,957,250)	(136,173,945)	(6,132,187)	(18,290,966)	—	—
<b>Total consolidated assets</b>	<b>1,698,909,241</b>	<b>250,664,777</b>	<b>166,128,881</b>	<b>150,692,919</b>	<b>655,239</b>	<b>24,917,981</b>	<b>111,307,039</b>	<b>9,034,375</b>	<b>23,705,118</b>	<b>93,266,621</b>	<b>1,443,189,883</b>
<b>Liabilities:</b>											
By segment	1,985,557,185	459,367,276	121,966,591	153,946,693	530,696	14,431,318	19,917,100	1,499,001	4,538,591	39,895,655	2,747,910,113
Less unrealized gain due to production cost valuation of inventory	—	—	—	—	—	—	—	—	—	1,525,137	—
<b>Total consolidated liabilities</b>	<b>1,985,557,185</b>	<b>459,367,276</b>	<b>121,966,591</b>	<b>153,946,693</b>	<b>530,696</b>	<b>14,431,318</b>	<b>19,917,100</b>	<b>1,499,001</b>	<b>4,538,591</b>	<b>41,420,792</b>	<b>2,747,910,113</b>

- (i) Due to the Corporate Reorganization, certain business units that were operated by the exploration and production segment were transferred to the drilling and services segment upon the formation of Pemex Drilling and Services on August 1, 2015. The results for the exploration and production segment for the year ended and as of December 31, 2015 include the results for these business units for the first seven months of 2015, prior to such transfers.
- (ii) Due to the Corporate Reorganization, certain business units that were operated by the refining segment were transferred to the logistic and fertilizers segments upon the formation of Pemex Logistics on October 1, 2015 and Pemex Fertilizers on August 1, 2015. The results for the refining segment for the year ended and as of December 31, 2015 include the results for these business units for the first ten and seven months of 2015, respectively, prior to such transfers.
- (iii) Due to the Corporate Reorganization, certain business units that were operated by the gas and basic petrochemicals segment were transferred to the cogeneration and services segment upon the formation of Pemex Cogeneration and Services on June 1, 2015, to the fertilizers segment upon the formation of Pemex Fertilizers on August 1, 2015 and to the logistics segment upon the formation of Pemex Logistics on October 1, 2015. The results for the gas and basic petrochemicals segment for the year ended and as of December 31, 2015 include the results for these business units for the first five, seven and nine months of 2015, respectively, prior to such transfers.
- (iv) Due to the Corporate Reorganization, certain business units that were operated by the petrochemicals segment were transferred to the ethylene segment upon the formation of Pemex Ethylene on August 1, 2015, to the fertilizers segment upon the formation of Pemex Fertilizers on August 1, 2015 and to the logistics segment upon the formation of Pemex Logistics on October 1, 2015. The results for the petrochemicals segment for the year ended and as of December 31, 2015 include the results for these business units for the first seven, seven and nine months of 2015, respectively, prior to such transfers.

- (v) Due to the Corporate Reorganization, certain business units that were operated by the exploration and production segment were transferred to the drilling and services segment upon the formation of Pemex Drilling and Services on August 1, 2015. The results for the drilling and services segment for the year ended and as of December 31, 2015 include the results for these business units for the last five months of 2015, after such transfers.

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- (vi) Due to the Corporate Reorganization, certain business units that were operated by the exploration and production segment, by the gas and basic petrochemicals segment and by the petrochemicals segment were transferred to the logistics segment upon the formation of Pemex Logistics on October 1, 2015. The results for the logistics segment for the year ended and as of December 31, 2015 include the results for these business units for the last three months of 2015, respectively, after such transfers.
- (vii) Due to the Corporate Reorganization, certain business units that were operated by the refining segment, by the gas and basic petrochemicals segment and by the petrochemicals segment were transferred to the fertilizers segment upon the formation of Pemex Fertilizers on August 1, 2015. The results for the fertilizers segment for the year ended and as of December 31, 2015 include the results for these business units for the last five months of 2015, respectively, after such transfers.
- (viii) Due to the Corporate Reorganization, certain business units that were operated by gas and basic petrochemicals segment were transferred to the cogeneration and services segment upon the formation of Pemex Cogeneration and Services on June 1, 2015. The results for the cogeneration and services segment for the year ended and as of December 31, 2015 include the results for these business units for the last seven months of 2015, after such transfers.
- (ix) Due to the Corporate Reorganization, certain business units that were operated by petrochemicals segment were transferred to the ethylene segment upon the formation of Pemex Ethylene on August 1, 2015. The results for the ethylene segment for the year ended and as of December 31, 2015 include the results for these business units for the last five months of 2015, after such transfers.

As of/for the year ended December 31, 2015	Exploration and Production	Refining	Gas and Basic Petrochemicals	Petrochemicals	Trading Companies	Corporate and Other Subsidiary Companies
<b>Sales:</b>						
By segment	Ps. 692,154,103	Ps. 655,973,297	Ps. 193,053,201	Ps. 43,312,115	Ps. 761,213,474	Ps. 23,403,624
Less unrealized intersegment sales	—	(593,821)	(3,391)	(5,304)	(200,197)	—
<b>Total consolidated sales</b>	<b>692,154,103</b>	<b>655,379,476</b>	<b>193,049,810</b>	<b>43,306,811</b>	<b>761,013,277</b>	<b>23,403,624</b>
<b>Operating income (loss):</b>						
By segment	(88,772,554)	(119,657,128)	17,157,764	4,201,751	10,334,137	2,651,448
Less unrealized intersegment sales	—	(593,821)	(3,391)	(5,304)	(200,197)	—
Less unrealized gain due to production cost valuation of inventory	(251,995)	19,348,041	1,041,564	1,293,740	494,727	—
Less capitalized refined products	(3,496,201)	—	—	—	—	—
Less amortization of capitalized interest	118,981	—	—	—	—	—
Less depreciation of revaluated assets	95,811	1,192,250	—	648,887	—	—
<b>Total consolidated operating income (loss)</b>	<b>(92,305,958)</b>	<b>(99,710,658)</b>	<b>18,195,937</b>	<b>6,139,074</b>	<b>10,628,667</b>	<b>2,651,448</b>
<b>Net income (loss):</b>						
By segment	(663,359,499)	(136,779,394)	17,645,476	4,457,719	8,402,644	(711,312,156)
Less unrealized intersegment sales	—	(593,821)	(3,391)	(5,304)	(200,197)	—
Less unrealized gain due to production cost valuation of inventory	(251,995)	19,348,041	1,041,564	1,293,740	494,727	—
Less capitalized refined products	(3,496,201)	—	—	—	—	—
Less equity method elimination	(45,679)	—	(614,969)	(483,120)	—	—
Less equity method for unrealized profits	118,981	—	—	—	—	—
Less depreciation of revaluated assets	95,811	1,192,250	—	648,887	—	—
<b>Total consolidated net income (loss)</b>	<b>(666,938,582)</b>	<b>(116,832,924)</b>	<b>18,068,680</b>	<b>5,911,922</b>	<b>8,697,174</b>	<b>(711,312,156)</b>
<b>Assets:</b>						
By segment	1,751,271,307	492,313,775	204,195,717	212,593,318	98,305,072	1,443,189,883
Less unrealized intersegment sales	1,132	(3,477,744)	(22,723)	(7,739)	(293,536)	—
Less unrealized gain due to production cost valuation of inventory	(19,699,526)	(23,904,032)	(581,492)	(777,260)	(4,744,915)	—
Less capitalized refined products	(3,496,201)	—	—	—	—	—
Less equity method for unrealized profits	(3,957,250)	(136,173,945)	—	(24,423,153)	—	—
Less amortization of capitalized interest	(411,221)	—	(3,593,620)	(3,952,754)	—	—
Less market value of fixed assets elimination	118,981	—	—	—	—	—
<b>Total consolidated assets</b>	<b>1,723,827,222</b>	<b>328,758,054</b>	<b>199,997,882</b>	<b>183,432,412</b>	<b>93,266,621</b>	<b>1,443,189,883</b>
<b>Liabilities:</b>						
By segment	1,999,988,503	479,284,376	122,497,287	159,984,285	39,895,655	2,747,910,113
Less unrealized gain due to production cost valuation of inventory	—	—	—	—	1,525,137	—
<b>Total consolidated liabilities</b>	<b>1,999,988,503</b>	<b>479,284,376</b>	<b>122,497,287</b>	<b>159,984,285</b>	<b>41,420,792</b>	<b>2,747,910,113</b>

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As of / for the year ended December 31, 2014	Exploration and Production	Refining	Gas and Basic Petrochemicals	Petrochemicals	Trading Companies	Corporate and Other Subsidiary Companies
Sales:						
By segment	Ps. 1,134,519,972	Ps. 844,588,586	Ps. 243,972,757	Ps. 44,258,725	Ps. 1,064,903,042	Ps. 70,121,196
Less unrealized intersegment sales	—	(3,100,091)	(20,204)	(3,036)	(102,262)	—
<b>Total consolidated sales</b>	<u>Ps. 1,134,519,972</u>	<u>Ps. 841,458,495</u>	<u>Ps. 243,952,553</u>	<u>Ps. 44,255,689</u>	<u>Ps. 1,064,800,780</u>	<u>Ps. 70,121,196</u>
Operating income (loss):						
By segment	Ps. 730,817,884	Ps. (101,970,712)	Ps. (9,527,142)	Ps. (19,066,287)	Ps. 5,844,320	Ps. 7,958,523
Less unrealized intersegment sales	—	(3,100,091)	(20,204)	(3,036)	(102,262)	—
Less unrealized gain due to production cost valuation of inventory	3,473,742	5,980,886	892,588	133,574	(2,213,946)	—
Less capitalized refined products	(3,789,845)	—	—	—	—	—
Less amortization of capitalized interest	118,981	—	—	—	—	—
<b>Total consolidated operating income (loss)</b>	<u>Ps. 730,620,762</u>	<u>Ps. (99,089,917)</u>	<u>Ps. (8,654,758)</u>	<u>Ps. (18,935,749)</u>	<u>Ps. 3,528,112</u>	<u>Ps. 7,958,523</u>
Net income (loss):						
By segment	Ps. (153,150,787)	Ps. (116,707,288)	Ps. 16,255,028	Ps. (19,129,147)	Ps. 6,401,398	Ps. (262,297,846)
Less unrealized intersegment sales	—	(3,100,091)	(20,204)	(3,036)	(102,262)	—
Less unrealized gain due to production cost valuation of inventory	3,473,742	5,980,886	892,588	133,574	(2,213,946)	—
Less capitalized refined products	(3,789,845)	—	—	—	—	—
Less equity method for unrealized profits	(29,116)	—	(1,543,620)	103,485	—	(98,865)
Less amortization of capitalized interest	118,981	—	—	—	—	—
<b>Total consolidated net income (loss)</b>	<u>Ps. (153,377,025)</u>	<u>Ps. (113,826,493)</u>	<u>Ps. 15,583,792</u>	<u>Ps. (18,895,124)</u>	<u>Ps. 4,085,190</u>	<u>Ps. (262,396,711)</u>
Assets:						
By segment	Ps. 1,973,640,697	Ps. 581,230,900	Ps. 215,690,484	Ps. 113,896,128	Ps. 107,000,991	Ps. 1,580,583,764
Less unrealized intersegment sales	1,132	(2,883,924)	(19,332)	(2,435)	(93,339)	—
Less unrealized gain due to production cost valuation of inventory	(15,776,956)	(43,252,073)	(1,623,055)	(2,071,000)	(3,952,291)	—
Less capitalized refined products	(3,789,845)	—	—	—	—	—
Less equity method for unrealized profits	(365,542)	—	(3,422,130)	(3,378,109)	—	(98,865)
Less amortization of capitalized interest	118,981	—	—	—	—	—
<b>Total consolidated assets</b>	<u>Ps. 1,953,828,467</u>	<u>Ps. 535,094,903</u>	<u>Ps. 210,625,967</u>	<u>Ps. 108,444,584</u>	<u>Ps. 102,955,361</u>	<u>Ps. 1,580,484,899</u>
Liabilities:						
By segment	Ps. 1,694,872,519	Ps. 828,576,773	Ps. 145,190,535	Ps. 148,149,492	Ps. 64,969,988	Ps. 2,314,525,120
Less unrealized gain due to production cost valuation of inventory	—	—	—	—	2,296,738	—
<b>Total consolidated liabilities</b>	<u>Ps. 1,694,872,519</u>	<u>Ps. 828,576,773</u>	<u>Ps. 145,190,535</u>	<u>Ps. 148,149,492</u>	<u>Ps. 67,266,726</u>	<u>Ps. 2,314,525,120</u>

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<u>As of / for the year ended December 31, 2013</u>	<u>Exploration and Production</u>	<u>Refining</u>	<u>Gas and Basic Petrochemicals</u>	<u>Petrochemicals</u>	<u>Trading Companies</u>	<u>Corporate and Other Subsidiary Companies</u>
Sales:						
By segment	Ps. 1,250,785,620	Ps. 820,912,682	Ps. 219,332,517	Ps. 40,360,373	Ps. 1,096,302,859	Ps. 60,568,624
Less unrealized intersegment sales	(13,957)	(1,521,679)	136,734	4,930	(174,663)	—
<b>Total consolidated sales</b>	<u>Ps. 1,250,771,663</u>	<u>Ps. 819,391,003</u>	<u>Ps. 219,469,251</u>	<u>Ps. 40,365,303</u>	<u>Ps. 1,096,128,196</u>	<u>Ps. 60,568,624</u>
Operating income (loss):						
By segment	Ps. 850,636,276	Ps. (119,734,273)	Ps. 873,221	Ps. (15,418,059)	Ps. 2,568,759	Ps. 185,058
Less unrealized intersegment sales	(12,826)	(1,521,678)	136,735	4,929	(174,663)	—
Less unrealized gain due to production cost valuation of inventory	17,747	12,301,255	435,920	166,048	5,509,332	—
Less capitalized refined products	(8,555,076)	—	—	—	—	—
Less amortization of capitalized interest	118,982	—	—	—	—	—
<b>Total consolidated operating income (loss)</b>	<u>Ps. 842,205,103</u>	<u>Ps. (108,954,696)</u>	<u>Ps. 1,445,876</u>	<u>Ps. (15,247,082)</u>	<u>Ps. 7,903,428</u>	<u>Ps. 185,058</u>
Net income (loss):						
By segment	Ps. (33,648,136)	Ps. (133,794,283)	Ps. 3,336,785	Ps. (15,034,572)	Ps. (2,361,929)	Ps. (173,636,179)
Less unrealized intersegment sales	(12,826)	(1,521,678)	136,734	4,930	(174,663)	—
Less unrealized gain due to production cost valuation of inventory	17,747	12,301,255	435,920	166,048	5,509,332	—
Less capitalized refined products	(8,555,076)	—	—	—	—	—
Less equity method for unrealized profits	(4,342)	—	—	(71,995)	—	2,841,035
Less amortization of capitalized interest	118,982	—	—	—	—	—
<b>Total consolidated net income (loss)</b>	<u>Ps. (42,083,651)</u>	<u>Ps. (123,014,706)</u>	<u>Ps. 3,909,439</u>	<u>Ps. (14,935,589)</u>	<u>Ps. 2,972,740</u>	<u>Ps. (170,795,144)</u>

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Supplemental geographic information:

	For the years ended December 31,		
	2015	2014	2013
Domestic sales	Ps. 746,235,912	Ps. 944,997,979	Ps. 910,187,634
Export sales:			
United States	266,826,499	481,364,906	493,148,967
Canada, Central and South America	11,027,813	17,575,078	21,004,723
Europe	58,707,787	54,214,041	86,872,410
Other	70,652,346	77,137,288	86,651,534
Total export sales	407,214,445	630,291,313	687,677,634
Services income	12,912,112	11,438,582	10,339,357
<b>Total sales</b>	<b>Ps. 1,166,362,469</b>	<b>Ps. 1,586,727,874</b>	<b>Ps. 1,608,204,625</b>

PEMEX does not have significant long-lived assets outside of Mexico.

The following table shows income by product:

	For the years ended December 31,		
	2015	2014	2013
<u>Domestic sales</u>			
Refined petroleum products and derivatives (primarily gasolines)	Ps. 660,573,780	Ps. 830,545,046	Ps. 805,460,402
Gas	54,497,824	77,813,359	70,781,410
Petrochemical products	31,164,308	36,639,574	33,945,822
<b>Total domestic sales</b>	<b>Ps. 746,235,912</b>	<b>Ps. 944,997,979</b>	<b>Ps. 910,187,634</b>
<u>Export sales</u>			
Crude oil	Ps. 288,170,451	Ps. 475,056,981	Ps. 548,411,085
Refined petroleum products and derivatives (primarily gasolines)	118,129,615	153,436,847	137,048,991
Gas	27,283	64,397	43,544
Petrochemical products	887,096	1,733,088	2,174,014
<b>Total export sales</b>	<b>Ps. 407,214,445</b>	<b>Ps. 630,291,313</b>	<b>Ps. 687,677,634</b>

**NOTE 6. CASH, CASH EQUIVALENTS AND RESTRICTED CASH**

As of December 31, 2015 and 2014, cash and cash equivalents were as follows:

	As of December 31,	
	2015	2014
Cash on hand and in banks <sup>(i)</sup>	Ps. 52,509,683	Ps. 68,330,390
Marketable securities	56,859,197	49,658,138
	<b>Ps. 109,368,880</b>	<b>Ps. 117,988,528</b>

(i) Cash on hand and in banks is primarily composed of cash in banks.

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At December 31, 2015, and 2014, restricted cash was as follows:

	<b>As of December 31,</b>	
	<b>2015</b>	<b>2014</b>
Restricted cash	<u>Ps. 9,246,772</u>	<u>Ps. 6,884,219</u>

Restricted cash in 2014 is primarily composed of the deposit made by Pemex-Exploration and Production in the amount of U.S. \$465,060 as a result of an arbitration claim before the International Court of Arbitration of the International Chamber of Commerce (the "ICA"). At December 31, 2015, this deposit, including income interest, amounted to Ps. 8,010,298 (see Note 25(b)). Additionally, restricted cash in 2015 primarily increased due to the deposit made by PMI HBV in an account in Banco Santander, S.A. as additional collateral for a credit agreement in accordance with the terms of the agreement. The credit agreement requires that PMI HBV maintain a loan-to-value ratio based on the ratio between the principal amount of debt and the market value in U.S. dollars of the Repsol S.A. ("Repsol") shares owned by PMI HBV. Accordingly, PMI HBV deposited this amount in order to maintain the loan-to-value ratio required under the credit agreement. As of December 31, 2015, this deposit, including income interest, amounted to Ps. 1,236,474 (see Note 10).

**NOTE 7. ACCOUNTS RECEIVABLE, NET**

As of December 31, 2015 and 2014, accounts receivable and other receivables were as follows:

	<b>As of December 31,</b>	
	<b>2015</b>	<b>2014</b>
Domestic costumers	Ps. 29,328,750	Ps. 38,168,467
Export customers	17,131,455	20,960,915
Sundry debtors	10,837,297	13,357,348
Tax credits	10,710,521	30,554,928
Advances to suppliers	5,634,114	5,583,148
Employee and officers	5,523,740	5,560,644
Insurance claims	43,490	212,069
Other account receivables	36,454	25,448
	<u>Ps. 79,245,821</u>	<u>Ps. 114,422,967</u>

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The following table shows a breakdown of accounts receivable based on their credit history at December 31, 2015 and 2014:

	<b>Domestic customers</b>	
	<b>As of December 31,</b>	
	<b>2015</b>	<b>2014</b>
1 to 30 days	Ps. 620,034	Ps. 814,629
31 to 60 days	28,278	268,844
61 to 90 days	(32,411)	189,871
More than 90 days	692,040	1,197,583
Expired	1,307,941	2,470,927
Impaired (Reserved)	(667,883)	(598,624)
Unimpaired	640,058	1,872,303
Unexpired	28,688,692	36,296,164
<b>Total</b>	<b>Ps. 29,328,750</b>	<b>Ps. 38,168,467</b>

	<b>Export customers</b>	
	<b>As of December 31,</b>	
	<b>2015</b>	<b>2014</b>
1 to 30 days	Ps. 323	Ps. 577,047
31 to 60 days	425	145,894
61 to 90 days	37,239	143
More than 90 days	413,603	218,570
Expired	451,590	941,654
Impaired (reserved)	(312,004)	(198,867)
Unimpaired	139,586	742,787
Unexpired	16,991,869	20,218,128
<b>Total</b>	<b>Ps. 17,131,455</b>	<b>Ps. 20,960,915</b>

**NOTE 8. INVENTORIES, NET**

As of December 31, 2015 and 2014, inventories were as follows:

	<b>As of December 31,</b>	
	<b>2015</b>	<b>2014</b>
Refined and petrochemicals products	Ps. 23,673,427	Ps. 23,506,652
Crude oil	11,461,185	15,941,297
Materials and products in stock	5,145,874	4,811,741
Products in transit	3,262,252	5,516,259
Materials in transit	120,750	—
Gas and condensate products	107,440	162,707
	<b>Ps. 43,770,928</b>	<b>Ps. 49,938,656</b>

**NOTE 9. HELD—FOR—SALE NON-FINANCIAL ASSETS**

In accordance with the Energy Reform Decree, Petróleos Mexicanos and the *Centro Nacional de Control de Gas Natural* (National Center of Natural Gas Control, or CENAGAS) signed a framework agreement on October 29, 2015 for the transfer to CENAGAS of assets, currently owned by Pemex Logistics, associated with the *Sistema Nacional de Gasoductos* (National Gas Pipeline System) and the distribution contract for the Naco-Hermosillo pipeline system valued at approximately Ps. 33,213,762 as of December 31, 2015. PEMEX will be compensated for these assets pursuant to terms set by the Energy Regulatory Commission.

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**NOTE 10. AVAILABLE—FOR—SALE NON-CURRENT FINANCIAL ASSETS**

On January 1, 2014, PEMEX had a total of 53,703,915 shares of Repsol valued at Ps. 17,728,490, which represented approximately 9.49% of Repsol's share capital.

On January 17, 2014, PMI HBV received its dividends in the form of 1,451,455 new Repsol shares.

On May 28, 2014, Repsol declared an extraordinary dividend to be paid out in cash, equivalent to one euro per share. On June 6, 2014, PMI HBV recognized a dividend for a total amount of Ps. 381,900, which was computed based on the number of shares it held at the time of distribution.

In May 2014, Petróleos Mexicanos cancelled in advance the three equity swaps with financial institutions through which it had obtained the economic and voting rights of 67,969,767 shares of Repsol, opting to convert them in one equity swap. These shares amounted to approximately 5.13% of Repsol's total shares as of May 2014. On June 3, 2014, Petróleos Mexicanos cancelled the single equity swap.

On June 4, 2014, PMI HBV divested its direct interest in 36,087,290 shares of Repsol at a sale price of 20.10 euros per share following the approval of the Board of Directors of Petróleos Mexicanos. As a result of this operation, the remaining Repsol shares owned by PMI HBV were recognized as available-for-sale financial assets on December 31, 2014. The decision to divest PMI HBV's position in Repsol was driven by the relatively low returns obtained from this investment and the lack of mutual benefits derived from PEMEX's alliance with Repsol. As a result of the sale of these shares, PMI HBV recognized a loss of Ps. 215,119 in its statement of comprehensive income.

On June 16, 2014, Repsol approved the payment of a flexible dividend, from which PMI HBV received 488,923 new Repsol shares in July 2014, valued at Ps. 190,814. On December 17, 2014, Repsol declared flexible dividends to its shareholders, from which PMI HBV received 575,205 new Repsol shares as an in kind dividend in January 2015, valued at Ps. 163,834. On June 15, 2015, Repsol declared flexible dividends to its shareholders, of which PMI HBV will receive 592,123 new Repsol shares in July 2015, valued at Ps. 171,451.

On August 4, 2015, PMI HBV obtained a loan for U.S. \$250,000, which bears interest at a rate of 1.79% and is due in 2018. The loan is collateralized by 20,724,331 Repsol shares which are presented as non-current assets.

As of December 31, 2015, PMI HBV holds 20,724,331 of Repsol shares.

On December 16, 2015, Repsol declared flexible dividends to its shareholders, from which PMI HBV received 942,015 new Repsol shares as an in kind dividend in January 2015. This amount recognized as an account receivable of Ps.188,490 as of December 31, 2015.

As of December 31, 2015 and December 31, 2014, the investments in 20,724,331 and 19,557,003 shares of Repsol held by PMI HBV were valued at Ps. 3,944,696 and Ps. 5,414,574, respectively. The effect of the valuation on the investment at fair value was recorded in other comprehensive result in the statement of changes in equity (deficit) as a loss of Ps. 3,206,316 at December 31, 2015, Ps. 765,412 at December 31, 2014 and a gain of Ps. 4,453,495 at December 31, 2013. In addition, PEMEX recorded dividend payments received from Repsol of Ps. 359,941, Ps. 736,302 and Ps. 914,116 in the statements of comprehensive income at December 31, 2015, 2014 and 2013, respectively.

As of December 31, 2015 and 2014, PEMEX's direct holdings of Repsol shares amounted to approximately 1.48% and 1.45% respectively, of Repsol's total shares.

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**NOTE 11. PERMANENT INVESTMENTS IN ASSOCIATES**

The permanent investments in associates as of December 31, 2015 and 2014, were as follows:

		Percentage of investment	December 31,	
			2015	2014
Deer Park Refining Limited		49.99%	Ps. 10,600,545	Ps. 7,322,445
Gasoductos de Chihuahua, S. de R. L. de C. V.	(iii)	50.00%	6,454,806	4,778,939
Petroquímica Mexicana de Vinilo, S. A. de C. V.		44.09%	3,954,251	3,521,924
Sierrita Gas Pipeline LLC	(i)	35.00%	983,059	885,792
Compañía Mexicana de Exploraciones, S. A. de C. V.	(ii)	60.00%	758,967	1,255,742
Frontera Brownsville, LLC		50.00%	404,129	349,631
TAG Norte Holding, S. de R. L. de C. V.	(i)(v)	5.00%	283,524	2,071,825
Texas Frontera, LLC		50.00%	224,834	196,832
CH Energía, S.A.		50.00%	183,474	162,524
Administración Portuaria Integral de Dos Bocas, S.A. de C.V.		40.00%	160,687	136,995
TAG Pipelines Sur, S. de R. L. de C. V.	(i)(v)	5.00%	61,747	544,201
Mexicana de Lubricantes, S. A. de C. V.	(iv)	49.00%	—	488,499
Other—net		Various	95,576	299,411
Total			<u>Ps. 24,165,599</u>	<u>Ps. 22,014,760</u>

- (i) New investment in 2014 not controlled by PEMEX, which is accounted for as a permanent investment in an associate under the equity method (see Note 3(a)).
- (ii) Compañía Mexicana de Exploraciones, S. A. de C. V. is not controlled by PEMEX and is accounted for as a permanent investment in an associate under the equity method (see Note 3(a)).
- (iii) On July 31, 2015, PEMEX announced the divestiture of Pemex-Gas and Basic Petrochemicals' 50% ownership interest in the Gasoductos de Chihuahua S. de R.L. de C.V. joint venture with Infraestructura Energética Nova, S.A.B. de C.V. As of December 31, 2015, the divestiture is still in process to be completed.
- (iv) On October 19, 2015, PEMEX announced the divestiture of Pemex-Refining's 49% ownership interest in the Mexicana de Lubricantes, S.A. de C.V. joint venture with Impulsora Jalisciense, S.A. de C.V., at a price of Ps. 826,175 with a profit of Ps. 337,675.
- (v) On December 15, 2015, PEMEX announced the divestiture of PMI HBV's ownership interest in the TAG Norte Holding, S. de R.L. de C.V., and TAG Pipelines Sur, S. de R.L. de C.V., joint ventures with TETL México Sur, S. de R.L. de C.V., at a price of Ps. 3,590,963 with a profit of Ps. 342,954. The figures presented represent Mex-Gas International's ownership interest in such companies.

**Profit (loss) sharing in associates:**

	December 31,		
	2015	2014	2013
Deer Park Refining Limited	\$1,913,835	\$(232,960)	\$(591,472)
Gasoductos de Chihuahua, S. de R. L. de C. V.	666,779	244,958	475,942
Sierrita Gas Pipeline LLC	152,445	6,478	—
TAG Norte Holding, S. de R. L. de C. V.	34,602	(108,126)	—
TAG Pipelines Sur, S. de R. L. de C. V.	(6,543)	(57,330)	—
Petroquímica Mexicana de Vinilo, S. A. de C. V.	(61,952)	(89,280)	93,853
Compañía Mexicana de Exploraciones, S. A. de C. V.	(496,774)	114,677	204,376
Other, net	115,723	155,951	524,011
Profit sharing in associates, net	<u>\$2,318,115</u>	<u>\$ 34,368</u>	<u>\$ 706,710</u>

The following tables show condensed financial information of major investments recognized under the equity method:

**Condensed statements of financial position**

	Deer Park Refining Limited December 31,		Gasoductos de Chihuahua, S. de R. L. de C. V. December 31,	
	2015	2014	2015	2014
Total assets	<u>Ps. 33,249,652</u>	<u>Ps. 27,134,381</u>	<u>Ps. 26,573,119</u>	<u>Ps. 20,877,785</u>
Total liabilities	<u>Ps. 12,046,441</u>	<u>Ps. 12,488,026</u>	<u>Ps. 13,663,507</u>	<u>Ps. 11,319,906</u>
Total equity	<u>21,203,211</u>	<u>14,646,355</u>	<u>12,909,612</u>	<u>9,557,879</u>
Total liabilities and equity	<u>Ps. 33,249,652</u>	<u>Ps. 27,134,381</u>	<u>Ps. 26,573,119</u>	<u>Ps. 20,877,785</u>

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**Condensed statements of comprehensive income**

	Deer Park Refining Limited			Gasoductos de Chihuahua, S. de R. L. de C. V.		
	December 31,			December 31,		
	2015	2014	2013	2015	2014	2013
Sales and other income	Ps. 16,658,705	Ps. 11,996,951	Ps. 9,767,622	Ps. 4,617,982	Ps. 2,406,375	Ps. 2,124,812
Costs and expenses	12,830,653	12,462,917	10,950,684	3,284,424	1,916,459	1,172,928
<b>Net result</b>	<b>Ps. 3,828,052</b>	<b>Ps. (465,966)</b>	<b>Ps. (1,183,062)</b>	<b>Ps. 1,333,558</b>	<b>Ps. 489,916</b>	<b>Ps. 951,884</b>

Additional information about the significant permanent investments in associates is presented below:

- *Deer Park Refining Limited*. On March 31, 1993, PMI Norteamérica, S.A. de C.V. (PMI NASA) acquired 50% of the Deer Park Refinery. In its capacity as General Partner of Deer Park Refining Limited Partnership, Shell is responsible for the operation and management of the Refinery, the purpose of which is to provide oil refinery services to PMI NASA and Shell for a processing fee. Shell is responsible for determining the crude oil and production materials requirements, and both partners are required to provide such crude oil and production materials in equal amounts; the Refinery returns to PMI NASA and Shell products in the same equal amounts. This investment is recorded under the equity method.
- *Gasoductos de Chihuahua*. On February 6, 2011, Pemex Industrial Transformation entered into a joint venture with Gasoductos Holding, S. de R.L. de C.V. to own and operate companies related to gas transportation and distribution, called Gasoductos de Chihuahua. Decision making requires the consent of both partners during a meeting. The participation of each of the partners is 50% of the share capital. This investment is recorded under the equity method.
- *Petroquímica Mexicana de Vinilo, S.A. de C.V.* On September 13, 2013, PEMEX and Mexichem founded Petroquímica Mexicana de Vinilo, S.A. de C.V. (Mexicana de Vinilo). Mexicana de Vinilo's main products are: chlorine, caustic soda, ethylene and petrochemical monomers and vinyl chloride. Mexichem is responsible for operational and financial decisions for Mexicana de Vinilo. This investment is recorded under the equity method.
- *Compañía Mexicana de Exploraciones S.A. de C.V., ("COMESA")*. COMESA was founded on November 12, 1968 to support PEMEX's exploration programs. The operations of COMESA are focused on designing integral solutions for the energy sector, along the value chain for Exploration and Production, Refining, Petrochemicals, Power and Geothermal sector and other energy areas all over the Mexican country, South America and United States of America. COMESA's principal activities are: gravimetric, magnetometric and microseismic studies, land seismic data acquisition (2D,3D, 3C), marine Seismic data acquisition, seismic data processing, seismic data interpretation and integration, vertical Seismic Profile (VSP) 2D and 3D, reservoir characterization and visualization, conceptualization and definition for exploration process. This participation is recorded under the equity method.
- *Frontera Brownsville, LLC*. On April 15, 2011, PMI Services North America entered into a joint venture, effective April 1, 2011, with TransMontaigne Operating Company L.P (TransMontaigne). Frontera Brownsville, LLC was incorporated in Delaware, U. S., and has the corporate power to own and operate certain facilities for the storage and treatment of clean petroleum products. PMI Services North America acquired a 50% non-operating share in most of the assets in TransMontaigne's Terminal. This investment is recorded under the equity method.

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- *Texas Frontera, LLC.* On July 27, 2010, PMI Services North America, Inc. entered into a joint venture with Magellan OLP, L.P. (Magellan) to build and own seven refined product storage tanks and certain related facilities in Galena Park, Texas on an easement granted by Magellan Terminal Holdings, L.P. (Magellan Holdings). Texas Frontera, LLC is based in Delaware, U.S. Under the joint venture, Magellan Holdings will be the responsible for Magellan's operation and will manage the construction of tanks and related infrastructure assets. This investment is recorded under the equity method.

Additional information on other permanent investments in associates is presented below:

- *Sierrita Gas Pipeline LLC.* Develops projects related to the transport infrastructure of gas in the U.S.
- *TAG Norte Holding, S. de R. L. de C. V.* Holding company of TAG Pipelines Norte, S. de R.L. de C.V.
- *CH4 Energía, S.A.* Engages in the purchase and sale of natural gas and in all activities related to the marketing of the natural gas, such as transport, distribution and others.
- *Administración Portuaria Integral de Dos Bocas, S.A. de C.V.* Coordinates the development and exploration of water and land in port areas in Mexico's public domain; operates the use and development of building sites and the installations built and to be built during the development of such port areas, including maritime signaling and the construction, maintenance and operation of marine terminals and facilities in the port area; and provides related port services.
- *TAG Pipelines Sur, S. de R. L. de C. V.* Coordinates the construction and future operation and maintenance of the southern portion of the Ramones II project.

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**NOTE 12. WELLS, PIPELINES, PROPERTIES, PLANT AND EQUIPMENT, NET**

	Plants	Drilling equipment	Pipelines	Wells	Buildings	Offshore platforms	Furniture and equipment	Transportation equipment	Construction in progress	Land	Unproductive fixed assets	Assets in process acquisition	Total fixed asset
<b>Investment</b>													
<b>Balances as of January 1, 2014</b>	Ps. 735,549,850	Ps. 45,039,305	Ps. 558,441,853	Ps. 1,100,557,457	Ps. 60,262,361	Ps. 326,324,608	Ps. 51,936,293	Ps. 23,317,687	Ps. 149,430,041	Ps. 42,357,857	Ps. 10,267,798	Ps. 32,562	Ps. 3,103,517,672
Acquisitions	23,713,976	1,713,819	4,604,246	47,206,226	955,327	5,867,427	3,602,912	2,200,877	141,566,631	889,450	79,715	1,486,211	233,886,817
Reclassifications	(4,413,133)	(623,772)	964,517	—	3,301,769	(59,381)	(385,362)	305,697	(127,229)	167,016	487,390	(303,270)	(685,758)
Impairment	16,072,431	—	9,197,666	62,848,040	787,907	5,113,356	35,512	—	(94,183,427)	128,515	—	—	(22,645,696)
Disposals	(1,137,399)	—	(1,972,994)	(19,226,711)	(308,592)	—	—	—	—	—	—	—	(15,983,495)
Disposals	(10,820,292)	—	(136,259)	—	(595,503)	—	(369,649)	(1,822,247)	(868,767)	(729,831)	(9,197)	(631,750)	—
<b>Balances as of December 31, 2014</b>	758,965,433	46,129,352	571,099,029	1,191,385,012	64,403,269	337,246,010	54,819,706	24,002,014	195,817,249	42,813,007	10,825,706	583,753	3,298,089,540
Acquisitions	21,066,695	6,117,156	5,331,416	49,027,740	2,624,138	6,874,162	1,531,683	236,284	155,841,872	12,077,308	114,062	4,015,295	264,857,811
Reclassifications	1,871,739	(313,503)	2,816,080	—	937,482	774	(607,369)	387,331	1,809,152	23,804	(6,448,543)	(3,275,979)	(2,799,032)
Capitalization	33,362,415	—	17,144,630	76,065,532	1,301,395	13,670,992	35,933	590,435	(141,792,676)	209,655	—	(588,311)	—
Impairment	(97,981,310)	—	(34,543,415)	(249,962,633)	—	(95,457,330)	—	—	—	—	—	—	(477,944,688)
Disposals	(68,872,958)	(30,252,662)	(141,868,232)	—	(2,981,818)	(2,006,512)	(2,813,759)	(9,886,969)	—	(11,775,972)	(4,491,225)	(103,881)	(275,053,988)
<b>Balances as of December 31, 2015</b>	648,412,014	21,680,343	419,979,508	1,066,515,651	66,284,466	260,328,096	52,966,194	15,329,095	211,675,597	43,347,802	—	630,877	2,807,149,643
<b>Accumulated depreciation and amortization</b>													
<b>Balances as of January 1, 2014</b>	Ps. (309,661,639)	Ps. (25,498,940)	Ps. (215,850,314)	Ps. (631,582,963)	Ps. (35,069,105)	Ps. (109,806,704)	Ps. (34,503,429)	Ps. (12,633,928)	Ps. —	Ps. —	Ps. (7,341,909)	Ps. —	Ps. (1,381,938,931)
Depreciation	(38,183,033)	(2,879,780)	(16,640,385)	(64,135,419)	(1,414,222)	(15,143,005)	(3,418,783)	(1,260,160)	—	—	—	—	(143,074,787)
Reclassifications	735,813	607,072	(179,524)	—	(1,073,720)	26,842	525,701	173,184	—	—	(129,792)	—	685,576
Disposals	7,816,567	—	12,172	—	412,737	—	345,065	899,753	—	—	126,446	—	9,612,740
<b>Balances as of December 31, 2014</b>	Ps. (339,292,292)	Ps. (27,771,648)	Ps. (232,658,051)	Ps. (695,718,382)	Ps. (37,144,310)	Ps. (124,922,867)	Ps. (37,051,446)	Ps. (12,811,151)	Ps. —	Ps. —	Ps. (7,345,255)	Ps. —	Ps. (1,514,715,402)
Depreciation	(41,107,609)	(3,041,899)	(16,777,673)	(84,823,893)	(1,608,620)	(15,986,093)	(3,533,648)	(1,071,815)	—	—	—	—	(167,951,250)
Reclassifications	(1,148,744)	283,636	(310,859)	—	(113,573)	—	1,259,561	(402,648)	—	—	3,231,659	—	2,799,032
Disposals	60,264,739	29,951,896	110,415,176	98,636	1,154,416	—	2,812,054	8,391,094	—	—	4,113,596	—	217,201,607
<b>Balances as of December 31, 2015</b>	(321,283,906)	(578,015)	(139,331,407)	(780,443,639)	(37,712,087)	(140,908,960)	(36,513,479)	(5,894,520)	—	—	—	—	(1,462,666,013)
<b>Wells, pipelines, properties, plant and equipment—net as of December 31, 2014</b>	Ps. 419,673,141	Ps. 18,357,704	Ps. 338,440,978	Ps. 495,666,630	Ps. 27,258,959	Ps. 212,323,143	Ps. 17,768,260	Ps. 11,190,863	Ps. 195,817,249	Ps. 42,813,007	Ps. 3,480,451	Ps. 583,753	Ps. 1,783,374,138
<b>Wells, pipelines, properties, plant and equipment—net as of December 31, 2015</b>	Ps. 327,128,108	Ps. 21,102,328	Ps. 280,648,101	Ps. 286,072,012	Ps. 28,572,379	Ps. 119,419,136	Ps. 16,452,715	Ps. 9,434,575	Ps. 211,675,597	Ps. 43,347,802	Ps. —	Ps. 630,877	Ps. 1,344,483,631
<b>Depreciation rates</b>	3 to 5%	5%	2 to 7%	—	3 to 7%	4%	3 to 10%	4 to 20%	—	—	—	—	—
<b>Estimated useful lives</b>	20 to 35 years	20 years	15 to 45 years	—	33 to 35 years	25 years	3 to 10 years	5 to 25 years	—	—	—	—	—

- As of December 31, 2015, 2014 and 2013, the financing cost identified with fixed assets in the construction or installation stage, capitalized as part of the value of such fixed assets, was Ps. 5,258,854, Ps. 3,997,121 and Ps. 2,943,597, respectively.
- The combined depreciation of fixed assets and amortization of wells for the fiscal years ended December 31, 2015, 2014 and 2013, recognized mainly in operating costs, was Ps. 167,951,250, Ps. 143,074,787 and Ps. 148,491,704, respectively, which includes costs related to plugging and abandonment of wells for the years ended December 31, 2015, 2014 and 2013 of Ps.1,401,870, Ps. 2,011,027, and Ps. 2,000,230, respectively.
- As of December 31, 2015 and 2014, provisions relating to future plugging of wells costs amounted to Ps. 56,894,695 and Ps. 52,460,749, respectively, and are presented in the “Provisions for plugging of wells” line item (see Note 18).
- As of December 31, 2015, PEMEX recognized an impairment of fixed assets of a loss of Ps. 477,944,688, mainly due to the decrease in cash flows as a result of the steep decline in crude oil prices as well as the condition of economic hydrocarbon reserves of Aceite Terciario del Golfo, Cantarell, Crudo Ligerio Marino y Burgos projects.

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*Cash generating unit of exploration and production*

The cash generating units of Pemex Exploration and Production are investment projects grouped from productive fields with hydrocarbon reserves associated with proved reserves (IP). These productive hydrocarbon fields contain varying degrees of heating power consisting of a set of wells and are supported by fixed assets associated directly with the production, such as pipelines, production facilities, offshore platforms, specialized equipment and machinery.

Each project represents the smallest unit which can concentrate the core revenues, achieving the direct association with the costs and expenses to be in possibilities to determine the future cash flows (value in use).

To determine the value in use of long-lived assets associated with hydrocarbon extraction, the net present value of reserves is determined based on the following assumptions:

Crude oil average price	57.57 U.S. dollars/bl (2016-2034)
Gas average price	3.39 U.S. dollars/mpc (2016-2034)
Condensated average price	41.63 U.S. dollars/bl (2016-2034)
Total production	8,694 mm bpce
Average rate of U.S. dollar	\$17.40 mxp/usd (2016-2034)
Production horizon	19 years
Discount rate	15.48% annually

Pemex Exploration and Production determines the recoverable amount of fixed assets based on the long-term estimated prices for Pemex Exploration and Production's proved reserves (IP). The recoverable amount on each asset is the value in use. As of December 31, 2015 the value in use of impairment fixed assets amounted to Ps. 266,214,532. Until December 31, 2014, Pemex Exploration and Production based its estimates on of long-term prices for proved reserves on a 25 year period for the projection of cash flows; however, due to changes in the applicable regulatory provisions as a result of the Energy Reform, as of January 1, 2015, the period used to estimate long-term prices was reduced to 20 years as a contractual limit. The discount rate used in 2015 was 15.48%, which included an assessment of factors of market risk, country risk, capital cost and cost of debt. Cash flows projections were determined based on the assumptions described above, presenting a declining rate of growth of Ps. 394,396,580. The main projects that were affected by this declining rate of growth were Cantarell, Tertiary Gulf Oil, Crudo Ligero Marino, Antonio J. Bermudez and Burgos.

*Cash generating unit of refining*

As a result of the Corporate Reorganization, the cash generating units of PEMEX's refining segment were redefined to those refineries located in the following strategic points of Mexico: Cadereyta, Minatitlán, Salamanca, Salina Cruz, Madero and Tula. The National Refinery System was defined previously.

To determine the value in use of long-lived assets associated with refineries of the National Refinery System, the net present value of reserves is determined based on the following assumptions:

Crude oil average price	56.02 U.S. dollars per processed barrel (2016-2029)
Processed volume	204.4 mbd (2016-2029 average)
Average rate of U.S. dollar	\$17.40 mxp/usd (2016-2029)
Useful lives of the cash generating units	Average of 14 years
Discount rate	13.72% annually

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Pemex Industrial Transformation calculates the recoverable amount of the refineries' assets based on each asset's value in use. The value in use for each asset is calculated based on cash flows, taking into consideration volumes produced and sold. As of December 31, 2015 the value in use of impairment fixed assets amounted to Ps. 1,801,000. Until December 31, 2015, the projection of cash flows was based on a period of 14 years. During 2015 the discount rate used was 13.72%.

As of December 31, 2015, the "Impairment of wells, pipelines, properties, plant and equipment" line item of the statement of comprehensive income includes a total impairment charge on long-lived assets of Ps. 75,724,859, which includes impairment charges of Ps. 53,890,967 recorded by the Minatitlán cash generating unit and Ps. 21,833,892 recorded by the Madero cash generating unit.

*Cash generating unit of gas*

The cash generating units of PEMEX's gas segment are gas processing centers located in the following strategic points of the Mexican Republic: Ciudad Pemex, Cactus, Nuevo Pemex Sale, Coatzacoalcos, Matapionche, Poza Rica, Burgos and Arenque.

To determine the value in use of long-lived assets associated with gas processing centers, the net present value of reserves is determined based on the following assumptions:

Crude oil average price	\$ 50.61 MXP average per mdpc (2016-2029)
Processed volume	2,021 mmpcd of sour gas (2016-2029) 805 mmpcd of wet-sweet gas (2016-2029)
Average rate of U.S. dollar	\$17.40 mxp/usd (2016-2029)
Useful lives of the cash generating units	Average of 11 years
Discount rate	9.52% annually

Pemex Industrial Transformation calculates the recoverable amount of assets based on each asset's value in use. The value in use for each asset is calculated based on cash flows, taking into consideration volumes produced and sold. As of December 31, 2015 the value in use of impairment fixed assets amounted to Ps. 235,000. Until December 31, 2015, the projection of cash flows was calculated based on a period of 13 years. During 2015 the discount rate used was 9.52%.

As of December 31, 2015, impairment of wells, pipelines, properties, plant and equipment includes an impairment charge on long-lived assets of Ps. 325,200 recorded by the Arenque cash generating unit.

*Cash generating unit of petrochemicals*

The cash generating units of PEMEX's petrochemicals segment are petrochemicals centers located in the following strategic points of Mexico: Independencia and Cangrejera.

Pemex Industrial Transformation calculates the recoverable amount of assets based on each asset's value in use. The value in use for each asset is calculated based on cash flows, taking into consideration volumes produced and sold. As of December 31, 2015 there was no value in use for these cash generating units. Until December 31, 2015, the projection of cash flows was calculated based on a period of 14 years. During 2015 the discount rate used was 8.84%.

As of December 31, 2015, impairment of wells, pipelines, properties, plant and equipment includes an impairment charge on long-lived assets of Ps. 392,020 recorded by the Cangrejera cash generating unit.

*Cash generating unit of logistics*

The cash generating units of PEMEX's logistics segments are pipelines, tankers, storage terminals and transportation equipment used for service, transport and storage of oil, oil products and petrochemicals. Cash generating units were redefined as a result of the Corporate Reorganization, they were previously part of cash generating units from The National Refinery System and imported products.

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Pemex Logistics calculates the recoverable amount of assets based on the value in use. The value in use for each asset is calculated based on cash flows, taking into consideration services income. As of December 31, 2015 the value in use of impairment fixed assets amounted to Ps. 93,873,919. Until December 31, 2014, the projection of cash flows was calculated based on a period from 5 to 21 years. During 2015 the discount rate used was 8.42%.

As of December 31, 2015, impairment of wells, pipelines, properties, plant and equipment includes an impairment charge on long-lived assets of Ps. 5,829,519 recorded by the cash generating units mentioned above.

*Cash generating unit of ethylene*

Pemex Ethylene calculates the recoverable amount of assets based on each asset's value in use. The value in use for each asset is calculated based on cash flows, taking into consideration sales and services income. As of December 31, 2015 the value in use of impairment fixed assets amounted to Ps. 129,843. During 2015 the discount rate used was 7.28%.

As of December 31, 2015, impairment of wells, pipelines, properties, plant and equipment includes an impairment charge on long-lived assets of Ps. 1,276,510 recorded by the cash generating units mentioned above.

As of December 31, 2014 and 2013, the value in use of the Integral Burgos, Poza Rica and Macuspana projects was unfavorable due to the decline in gas prices in the international market as well as the condition of economic hydrocarbon reserves located at these projects, which resulted in impairment charges of Ps. 21,199,704 and Ps. 26,364,717, respectively, that were recognized in the consolidated statements of comprehensive income under the impairment of wells, pipelines, properties, plant and equipment line item.

As of December 31, 2014, PEMEX's petrochemicals segment recognized impairment charges totaling Ps. 1,445,992. As a result of the sale of certain properties and plants from the Pajaritos petrochemical complex by Pemex-Petrochemicals to Petroquímica Mexicanan de Vinilo, S.A. de C.V., value in use for the complex was favorable, reducing the impairment charge for previous years by Ps. 1,650,664 as of December 31, 2013.

PEMEX's net-future cash flow projections are based on the best available estimations of revenues and expenses of the cash-generating units, using forecasts, past performances and market development. PEMEX's annual budget and business plan set macroeconomic variables for each of the cash-generating units using real basis and including some variables, such as production volume, market prices, exchange rates, among other variables, which are used to quantify estimated income and expenses. Forecasts are prepared based on internal values and are updated based on changes to certain relevant information from external sources (mainly price predictions made by consultants and specialized entities).

The key value assumptions, which are the more sensitive variables used to calculate net cash flows, and the general principles used to generate these assumptions are as follows:

- i. Sales prices for oil and gas. The resulting prices are consistent with those used by PEMEX to make investing decisions and are based on observable prices in the international market from the date of the statement of financial position.
- ii. Reserves and production programs. Proved reserves of oil and gas are estimated on the basis of oil and gas reserves as of December 31, 2015 adjusted to comply with applicable rules, with the framework established by the SEC and with the framework established by the Sociedad de Ingenieros Petroleros, taking into account the development plan. Productions programs are estimated on the basis of reserves, production levels in actual wells and development plans established for each productive field.
- iii. Operating expenses and investments. Operating expenses and investments are calculated in the first year based on PEMEX's annual budget for the first year and subsequently updated in accordance with asset development programs. PEMEX does not include expenses related to enhancement of assets in order to carry out tests using value in accordance with IAS 36, "Impairment of Assets."

These future net cash flows estimates are discounted to their present value using discount rates for specific cash-generating units based on the currency in which they are denominated, their cash flows and risks associated with these cash flows. Discount rates

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are intended to reflect current market assessments of the time value of money and the specific risks of each asset. Accordingly, various discount rates used take into account the country risk. To ensure calculations are consistent and avoid double counting, the cash flow projections do not take into account the risks that have already been incorporated in the discount rates used. The discount rates reflect current market conditions and the specific risks associated with these assets.

- e. As a result of the Energy Reform Decree, the secondary legislation and the corresponding initial adjudication of rights for the exploration and extraction of oil and solid hydrocarbons mentioned in transitory article 6 of the Energy Reform Decree, certain assignments that Pemex Exploration and Production received from the Mexican government were affected. These investments will be compensated at their fair value pursuant to the terms determined by Ministry of Energy. As of December 31, 2015, the aggregate values of the asset blocks that were assigned to Petróleos Mexicanos on a temporary basis consist of the following:

	<u>Field</u>	<u>Amount</u>
Temporary assigned fields	72	Ps. 55,391,161
Temporary assigned and tendered fields	23	3,186,873
Non-assigned fields	320	7,266,785
Requested fields non-assigned	40	4,614,086
		<b><u>Ps. 70,458,905</u></b>

The value of areas not requested, not assigned and partially assigned amounted to U.S. \$10,721,000, as follows:

	<u>Area</u>	<u>Amount</u>
Not requested area	718	U.S. \$ 6,684,000
Requested non- assigned areas	52	2,106,000
Partially assigned areas	62	1,931,000
		<b><u>U.S. \$ 10,721,000</u></b>

- f. PEMEX entered into certain capital lease arrangements for tankers. These leases expire on various dates until 2018.

As of December 31, 2013, PEMEX had entered into certain capital lease arrangements for drilling equipment. These leases expire on various dates over the next 10 years.

As of December 31, 2015, PEMEX had entered into certain capital lease arrangements for offshore platforms. These leases expire on various dates over the next 10 years.

As of December 31, 2015 and 2014, assets acquired through these capital leases were as follows:

	<u>2015</u>	<u>2014</u>
Investment in tankers and drilling equipment	Ps. 11,142,197	Ps. 5,017,002
Less accumulated depreciation	(1,176,208)	(953,152)
	<b><u>Ps. 9,965,989</u></b>	<b><u>Ps. 4,063,850</u></b>

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The liabilities relating to the assets listed above are payable in the years following December 31, 2015 as presented below:

<b>Year</b>	<b>Pesos</b>	<b>U.S. dollars</b>
2016	Ps. 1,696,237	U.S. \$ 98,581
2017	1,696,082	98,572
2018	1,616,843	93,967
2019	1,036,951	60,265
2020	1,036,951	60,265
2021 and thereafter	3,950,892	229,617
	<u>11,033,956</u>	<u>641,267</u>
Less: short-term unaccrued interest	440,640	25,609
Less: long-term unaccrued interest	<u>1,378,395</u>	<u>80,109</u>
Total capital leases	9,214,921	535,549
Less: current portion of leases (excluding interest)	<u>1,255,597</u>	<u>72,972</u>
<b>Total long-term capital leases</b>	<u>Ps. 7,959,324</u>	<u>U.S. \$ 462,577</u>

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The capitalized interest expense from financial leases for the years ended December 31, 2015, 2014 and 2013 was Ps. 450,760, Ps. 242,436 and Ps. 159,380, respectively.

The discount rates applied to the calculation of capitalized leases were as follows:

- i. 7.96 % rate in nominal terms (5.71% in real terms) as of December 31, 2015.
- ii. 7.96% rate in nominal terms (3.73% in real terms) as of December 31, 2014.
- iii. 7.96% rate in nominal terms (3.83% in real terms) as of December 31, 2013.

#### NOTE 13. INTANGIBLE ASSETS

At December 31, 2015 and 2014, intangible assets include wells unassigned to a reserve, which amounted Ps. 14,304,961 and Ps. 14,970,904, respectively.

	As of December 31,	
	2015	2014
Wells unassigned to a reserve:		
Balance at the beginning of period	Ps. 14,970,904	Ps. 7,892,474
Additions to construction in progress	28,725,376	24,185,826
Transfers against expenses	(13,081,780)	(9,793,246)
Transfers against fixed assets	(16,309,539)	(7,314,150)
<b>Balance at the end of period</b>	<b>Ps. 14,304,961</b>	<b>Ps. 14,970,904</b>

#### NOTE 14. OTHER ASSETS

At December 31, 2015 and 2014, the balance of other assets was as follows:

	As of December 31,	
	2015	2014
Long-term note receivable	Ps. 50,000,000	Ps. —
Payments in advance	1,980,260	2,959,819
Other	5,427,400	4,694,541
	<b>Ps. 57,407,660</b>	<b>Ps. 7,654,360</b>

On December 24, 2015, the SHCP published in the Official Gazette of the Federation the Disposiciones de carácter general relativas a la asunción por parte del Gobierno Federal de obligaciones de pago de pensiones y jubilaciones a cargo de Petróleos Mexicanos y sus empresas productivas subsidiarias (General provisions regarding the assumption by the Federal Government of the payment obligations related to pensions and retirement plans of Petróleos Mexicanos and its productive state-owned subsidiaries). These regulations state the terms, conditions, financing mechanisms and payment arrangements pursuant to which the SHCP assumed a portion of the payment obligations related to PEMEX's pensions and retirement plans. An independent expert will review the calculation, the methodology used, the maturity profile and all of the information provided by us.

In accordance with these provisions and prior to the completion of the independent expert's review described above, on December 24, 2015, the Mexican Government issued in advance payment, through the SHCP, a Ps. 50,000,000 promissory note due December 31, 2050 payable to Petróleos Mexicanos. The promissory note, which accrues interest at a rate of 6.93% per year, has been recognized as a long-term note receivable in non-current assets once the independent expert named by SHCP concludes its review. The promissory note is expected to be exchanged for different credit instruments, not yet specified, in the 60 business days following the conclusion of the expert's review.

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**NOTE 15. DEBT**

The Federal Income Law applicable to PEMEX as of January 1, 2015, published in the Official Journal of the Federation on November 13, 2014, authorized Petróleos Mexicanos and its subsidiaries entities to incur an internal net debt up to Ps. 110,500,000 and an external net debt up to U.S. \$6,500,000. PEMEX can incur additional internal or external debt, as long as the total amount of net debt (Ps.195,000,000 equivalent to U.S. \$15,000,000) does not exceed the ceiling established by the Federal Income Law.

On November 18, 2014, the Board of Directors of PEMEX approved policies and general requirements for obligations that constitute public debt of Petróleos Mexicanos and Subsidiary Entities, in accordance with the Article 107 of the Petróleos Mexicanos Law.

Subsequently, the Board of Directors of PEMEX, approved the debt program for fiscal year 2015 in accordance with Article 13 section XXVI of the Petróleos Mexicanos Law.

The Board of Directors approves the terms and conditions for the incurrence of obligations that constitute public debt of Petróleos Mexicanos for each fiscal year, in accordance with the Petróleos Mexicanos Law and the *Reglamento de la Ley de Petróleos Mexicanos* (Regulations to the Petróleos Mexicanos Law). These terms and conditions are promulgated in conformity with the guidelines approved by the SHCP for Petróleos Mexicanos for the respective fiscal year.

During 2015, the significant financing activities of PEMEX were as follows:

- a. On January 16, 2015, Petróleos Mexicanos obtained a direct loan for Ps. 7,000,000 bearing interest at a floating rate linked to the *Tasa de Interés Interbancaria de Equilibrio* (Interbank Equilibrium Interest Rate, or "TIIE"), which matures on January 16, 2016.
- b. On January 22, 2015, Petróleos Mexicanos increased its Medium-Term Notes Program from U.S. \$42,000,000 to U.S. \$52,000,000. As of December 31, 2015, all debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- c. On January 23, 2015, Petróleos Mexicanos issued U.S. \$6,000,000 of its debt securities under its U.S. \$52,000,000 Medium-Term Notes Program, Series C in three tranches: (1) U.S. \$1,500,000 of its 3.500% Notes due 2020; (2) U.S. \$1,500,000 of its 4.500% Notes due 2026; and (3) U.S. \$3,000,000 of its 5.625% Bonds due 2046.
- d. On January 30, 2015, Petróleos Mexicanos amended the terms of its revolving credit facility in order to increase the amount available thereunder from U.S. \$1,250,000 to U.S. \$3,250,000 and to extend the maturity date to February 5, 2020. On February 5, 2015, Petróleos Mexicanos borrowed U.S. \$1,950,000 under this facility to prepay in full its U.S. \$700,000 credit facility dated as of December 17, 2014.
- e. On February 11, 2015, Petróleos Mexicanos issued Ps. 24,287,902 aggregate principal amount of *Certificados Bursátiles* in three tranches. The first tranche was issued at a fixed rate of 7.47% due 2026 in an aggregate principal amount of Ps. 17,000,000, consisting of (1) an international offering outside of Mexico of Ps. 9,000,000 of "Euroclearable *Certificados Bursátiles*," which are eligible for clearance through Euroclear Clearance System plc and Indeval, and (2) a concurrent offering to the public in Mexico of Ps. 8,000,000. This issuance was a reopening of the same series of *Certificados Bursátiles* due 2026 that was originally issued on November 27, 2014. The second tranche was issued at a floating rate due 2020 in an aggregate principal amount of Ps. 4,300,000. This issuance was a reopening of the same series of *Certificados Bursátiles* due 2020 that was originally issued on November 27, 2014.

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The third tranche was issued at a fixed rate of 3.94% due 2026 in an aggregate principal amount of 565,886,800 *Unidades de Inversión* ("UDIs"), equivalent to Ps. 2,987,902. This issuance represented the fourth reopening of the same series originally issued on January 30, 2014 and subsequently reopened on July 2, 2014, September 11, 2014 and November 27, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 200,000,000 or UDI equivalent *Certificados Bursátiles* Program.

- f. On February 11, 2015, Petróleos Mexicanos entered into a term loan credit facility in the amount of U.S. \$ 2,000,000. On February 17, 2015, Petróleos Mexicanos borrowed U.S. \$2,000,000 under this facility to prepay in full its credit agreement dated as of November 18, 2010.
- g. On March 24, 2015, the CNBV authorized Petróleos Mexicanos' Short-Term *Certificados Bursátiles* Program for an aggregate revolving amount of Ps. 100,000,000. As of September 30, 2015, all debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- h. On April 21, 2015, Petróleos Mexicanos issued €2,250,000 of its debt securities under its U.S. \$52,000,000 Medium-Term Notes Program, Series C in two tranches: (1) €1,250,000 of its 2.750% Notes due 2027; and (2) €1,000,000 of its 1.875% Notes due 2022. As of December 31, 2015, all debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- i. On May 6, 2015, AGRO withdrew U.S. \$50,000 from its credit line, withdrawals from which bear interest at a floating rate linked to the London Interbank Offered Rate ("LIBOR"), which matures on December 18, 2017.
- j. On June 26, 2015, Petróleos Mexicanos received a disbursement of U.S. \$500,000 from its revolving credit lines.
- k. On July 7, 2015, Petróleos Mexicanos obtained a loan for Ps. 18,000,000 bearing interest at a floating rate linked to THIE plus 0.95%, which matures on July 7, 2025.
- l. On July 16, 2015, Petróleos Mexicanos issued in the Mexican market Ps. 7,721,582 aggregate principal amount of *Certificados Bursátiles* under its Ps. 200,000,000 or UDI equivalent *Certificados Bursátiles* Program, in three tranches: (1) an aggregate principal amount of Ps. 650,000 at a floating rate linked to the THIE plus 0.15% due 2020; (2) an aggregate principal amount of Ps. 6,100,000 at a fixed rate of 7.47% due 2026; and (3) an aggregate principal amount of 183,941 UDIs, equivalent to approximately Ps. 971,582, at a fixed rate of 3.94% due 2026. As of December 31, 2015, all debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- m. On July 31, 2015, Petróleos Mexicanos issued U.S. \$525,000 of notes due 2025, which bear interest at a fixed rate of 2.46%. The notes are guaranteed by the Export-Import Bank of the United States.
- n. On August 4, 2015, PMI HBV obtained a loan for U.S. \$250,000, which bears interest at a rate of 1.79% and is due in 2018. The loan is collateralized by 20,724,331 Repsol shares.

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- o. On August 14, Petróleos Mexicanos borrowed U.S. \$500,000 in two tranches, each of them of U.S. \$250,000 of its revolving credit lines and dollars, which mature in August 2015.
- p. On August 28, 2015, Petróleos Mexicanos borrowed U.S. \$120,000 from a certain U.S. \$3,250,000 revolving credit line, which bears interest at a floating rate linked to the LIBOR that is due in February 2016.
- q. On September 2015, Petróleos Mexicanos borrowed U.S. \$800,000 from its revolving credit lines entered into with international financial institutions.
- r. On September 30, 2015, Petróleos Mexicanos entered into a credit facility in the amount of Ps. 5,000,000, which bears interest at a floating rate linked to the TIIE and matures in September 2023. This credit facility was fully disbursed on October 7, 2015.
- s. On September 30, 2015, Petróleos Mexicanos borrowed U.S. \$500,000 from its revolving credit line, which bears interest at a rate linked to LIBOR and matures in December 2025. The credit facility is guaranteed by the Export-Import Bank of the United States.
- t. On September 30, 2015, Petróleos Mexicanos borrowed U.S. \$475,000 from its revolving credit line, which bears interest at a rate linked to LIBOR and matures in December 2025. The credit facility is guaranteed by the Export-Import Bank of the United States.
- u. On September 30, 2015, Petróleos Mexicanos issued in the Mexican market Ps. 7,400,493, aggregate principal amount of *Certificados Bursátiles* under its Ps. 200,000,000, or UDI equivalent *Certificados Bursátiles* Program, in two tranches: (1) an aggregate principal amount of Ps. 1,357,737 at a fixed rate of 3.68% due 2018; and (2) an aggregate principal amount of 1,138,056 UDIs, equivalent to approximately Ps. 6,042,756, at a fixed rate of 5.23% due 2035. As of December 31, 2015, all debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- v. On October 7, 2015, Petróleos Mexicanos obtained a loan from a line of credit for Ps. 5,000,000, bearing interest at a floating rate linked to the TIIE, which matures on September 30, 2023.
- w. On October 16, 2015, Petróleos Mexicanos obtained a loan from a line of credit for Ps. 5,000,000, bearing interest at a floating rate linked to the TIIE, which matures on October 16, 2022.
- x. On November 6, 2015, Petróleos Mexicanos issued €100,000 of notes due 2030, which bear interest at a fixed rate of 4.625%. The notes are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- y. On December 8, 2015, Petróleos Mexicanos issued CHF 600,000 of its 1.5% Notes due 2020 under its U.S. \$52,000,000 Medium-Term Notes Program, Series C. The notes are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- z. On December 15, 2015, Petróleos Mexicanos obtained a loan for Ps. 10,000,000, bearing interest at a floating rate linked to the TIIE, which matures on March 15, 2016.

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- aa. On December 21, 2015, Petróleos Mexicanos entered into a new bilateral revolving credit facility in the amount of Ps. 3,500,000; the facility bears interest at a floating rate linked to the TTIE of 28 days, plus 60 base points and matures on December 21, 2018. This facility will replace the revolving credit facility that expired on December 23, 2015.
- bb. On December 29, 2015, Petróleos Mexicanos obtained a loan for Ps. 4,400,000, bearing interest at a floating rate linked to the TIIE, which matures on March 29, 2016.
- cc. In addition, during the period from January 1, 2015 to December 21, 2016, Petróleos Mexicanos made another disbursements totaling U.S. \$132,700.

From January 1, 2015 to December 31, 2015, P.M.I. Holdings B.V. obtained U.S. \$1,540,000 in financing from its revolving credit line and repaid U.S. \$2,040,000. As of December 31, 2014, the outstanding amount under this revolving credit line was US\$500,000. As of December 31, 2015 there were not pending payments.

As of December 31, 2015, Petróleos Mexicanos had U.S. \$4,500,000 and Ps. 23,500,000 in lines of credit in order to ensure liquidity, of which U.S. \$130,000 and Ps. 9,100,000, respectively, remain available.

During 2014, the significant financing activities of PEMEX were as follows:

- a. On January 23, 2014, Petróleos Mexicanos issued US\$ 4,000,000 of its debt securities under its US\$ 32,000,000 Medium-Term Notes Program, Series C in three tranches: (i) U.S. \$500,000 of its 3.125% Notes due 2019; (ii) U.S. \$500,000 of its 4.875% Notes due 2024, which was a reopening of its 4.875% Notes due 2024 originally issued on July 18, 2013; and (iii) U.S. \$3,000,000 of its 6.375% Bonds due 2045. All debt securities issued under this program are guaranteed by Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals.
- b. On January 23, 2014, the SHCP authorized the increase of the Petróleos Mexicanos' Medium-Term Notes Program Series C from U.S. \$32,000,000 to U.S. \$42,000,000. All debt securities issued under this program are guaranteed by Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals.
- c. On January 30, 2014, Petróleos Mexicanos issued Ps. 7,500,000 aggregate principal amount of *Certificados Bursátiles* due 2024 at a fixed rate of 7.19%, consisting of (i) an international offering outside of Mexico of Ps. 2,616,050 of *Certificados Bursátiles* in the form of global depositary notes ("GDNs") and (ii) a concurrent offering to the public in Mexico of Ps. 4,883,950 of *Certificados Bursátiles* not represented by GDNs. The issuance represented the second reopening of the same series of *Certificados Bursátiles* due 2024 originally issued on September 26, 2013 and reopened on December 11, 2013. Concurrently, Petróleos Mexicanos issued, in the Mexican market, Ps. 5,000,000 aggregate principal amount of *Certificados Bursátiles* in two tranches: one at a floating rate of TIIE plus 3.8% for Ps. 2,000,000 due 2019, which was a reopening of the same series of *Certificados Bursátiles* due 2019 originally issued on September 19, 2013 and reopened on December 11, 2013; and the second at a fixed rate of 3.94% for 588,435 UDIs equivalent to Ps. 3,000,000 due 2026. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 300,000,000 UDIs equivalent *Certificados Bursátiles* Dual Program. All debt securities issued under this program are guaranteed by Pemex-Exploration and Production, Pemex-Refining and Pemex-Gas and Basic Petrochemicals.
- d. On March 20, 2014, Petróleos Mexicanos borrowed U.S. \$1,000,000 from its revolving credit line, which bears interest at a floating rate linked to the LIBOR plus 0.16%. This drawdown has been renewed on a monthly basis and was outstanding as of December 31, 2014.
- e. On March 21, 2014, Petróleos Mexicanos obtained a loan for U.S. \$300,000 from an export credit agency, which bears interest at a rate of 1.08% and matures in March 2018.

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- f. On April 16, 2014, Petróleos Mexicanos issued €1,000,000 of its 3.75% Notes due 2026. These notes were issued under Petróleos Mexicanos' U.S. \$42,000,000 Medium-Term Notes Program, Series C.
- g. On May 30, 2014, Petróleos Mexicanos obtained a loan for Ps. 10,000,000 from its revolving credit line, which bore interest at a floating rate linked to the THIE and matured on July 2, 2014 and as a result did not affect net indebtedness for the year.
- h. On June 2, 2014, Petróleos Mexicanos obtained loans for U.S. \$1,250,000 and U.S. \$250,000 from its revolving credit line, which bears interest at a floating rate linked to LIBOR and matured in 2014.
- i. On July 2, 2014, Petróleos Mexicanos issued Ps. 11,000,000 aggregate principal amount of its *Certificados Bursátiles* due 2024 at a fixed rate of 7.19%, consisting of (i) an international offering outside of Mexico of Ps. 2,353,100, of *Certificados Bursátiles* in the form of GDNs and (ii) a concurrent offering to the public in Mexico of Ps. 8,646,900 of *Certificados Bursátiles* not represented by GDNs. The issuance represented the third reopening of its *Certificados Bursátiles* due 2024, which were originally issued on September 26, 2013 and subsequently reopened on December 11, 2013 and January 30, 2014. Petróleos Mexicanos concurrently issued in the Mexican market Ps. 4,000,000 aggregate principal amount of *Certificados Bursátiles* in two tranches: (i) the first at a floating rate due 2019 in an aggregate principal amount of Ps. 1,500,000, which was a reopening of the same series originally issued on September 19, 2013 and subsequently reopened on December 11, 2013 and January 30, 2014 and (ii) the second at a fixed rate of 3.94% due 2026 in an aggregate principal amount equal to 487.2 million UDIs equivalent of Ps. 2,500,000, which was a reopening of the same series originally issued on January 30, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 200,000,000 or UDI equivalent *Certificados Bursátiles* Program.
- j. On July 25, 2014, Petróleos Mexicanos entered into a syndicated credit facility in the amount of Ps. 26,000,000; the facility bears interest at a floating rate linked to the THIE plus 95 basis points and matures on July 25, 2024.
- k. On July 29, 2014, Petróleos Mexicanos amended the terms of its revolving credit facility entered into on December 22, 2011 in order to decrease the amount available thereunder from Ps. 10,000,000 to Ps. 3,500,000.
- l. On September 8, 2014, Petróleos Mexicanos amended the terms of its syndicated credit facility entered into on July 26, 2014 in in a total amount of Ps. 4,000,000, in order to increase the amount available thereunder from Ps. 26,000,000 to Ps. 30,000,000. On September 10, 2014, Petróleos Mexicanos borrowed the full amount available under this credit facility.
- m. On September 11, 2014, Petróleos Mexicanos issued Ps. 19,999,269 aggregate principal amount of *Certificados Bursátiles* due 2024 at a fixed rate of 7.19%, consisting of (i) an international offering outside of Mexico of Ps. 3,418,200 of *Certificados Bursátiles* in the form of GDNs; and (ii) a concurrent offering to the public in Mexico of Ps. 16,581,069 of *Certificados Bursátiles* not represented by GDNs. The issuance represented the fourth reopening of its *Certificados Bursátiles* due 2024, which were originally issued on September 26, 2013 and subsequently reopened on December 11, 2013, January 30, 2014 and July 2, 2014. Petróleos Mexicanos concurrently issued in the Mexican market *Certificados Bursátiles* in two tranches: (i) one at a floating rate of THIE plus 0.01% due 2019 in an aggregate principal amount of Ps. 5,000,000, which was the fourth reopening of the same series originally issued on September 19, 2013 and subsequently reopened on December 11, 2013, January 30, 2014 and July 2, 2014 and (ii) the second at a fixed rate of 3.94% due 2026 in an aggregate principal amount equal to 968,671 UDI equivalent of Ps. 5,000,731, which was the second reopening of the same series originally issued on January 30, 2014 and subsequently reopened on July 2, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 200,000,000 or UDI equivalent *Certificados Bursátiles* Program.

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- n. On October 14, 2014, Petróleos Mexicanos issued U.S. \$500,000 of notes due 2025, which bear interest at LIBOR for 3 months plus 0.35%. The notes are guaranteed by the Export-Import Bank of the United States.
- o. On October 15, 2014, Petróleos Mexicanos issued U.S. \$2,500,000 of debt securities under its US\$ 42,000,000 Medium-Term Notes Program, Series C, in two tranches: (1) U.S. \$1,000,000 of its 4.250% Notes due 2025, and (2) U.S. \$1,500,000 of its 5.50% Bonds due 2044, which was the second reopening of its 5.50% Bonds due 2044 originally issued on June 26, 2012 and subsequently reopened on October 19, 2012.
- p. On October 20, 2014, Petróleos Mexicanos issued U.S. \$500,000 of notes due 2025, which bear interest at a fixed rate of 2.378%. The notes are guaranteed by the Export-Import Bank of the United States.
- q. On November 14, 2014, Petróleos Mexicanos redeemed the entire outstanding principal amount of (i) U.S. \$1,500,000 of its 4.875% Notes due 2015 and (ii) U.S. \$234,915 of its 5.750% Notes due 2015. The resources used to redeem these debt securities were derived from the issuance dated October 15, 2014.
- r. On November 19, 2014, Petróleos Mexicanos entered into a revolving credit facility in the amount of Ps. 20,000,000; the facility bears interest at a floating rate linked to the TIIE and matures on November 19, 2019.
- s. On November 27, 2014, Petróleos Mexicanos issued in the Mexican market Ps. 15,000,000 aggregate principal amount of *Certificados Bursátiles* in three tranches: one at a fixed rate of 7.47% due 2026 in an aggregate principal amount of Ps. 8,301,389; the second at a floating rate of TIIE plus 15 basis points due 2020 in an aggregate principal amount of Ps. 5,000,000; and the third at a fixed rate of 3.94% due 2026 in an aggregate principal amount of 325,000,000 UDIs, equivalent to Ps. 1,698,611, which was the third reopening of the same series originally issued on January 30, 2014 and subsequently reopened on July 2, 2014 and September 11, 2014. These *certificados bursátiles* were issued under Petróleos Mexicanos' Ps. 200,000,000 or UDI equivalent *Certificados Bursátiles* Program.
- t. On December 15, 2014, Petróleos Mexicanos obtained a loan for Ps. 3,500,000 bearing interest at a floating rate.
- u. On December 17, 2014, Petróleos Mexicanos entered into a credit facility in the amount of U.S. \$700,000. On December 19, 2014, Petróleos Mexicanos borrowed U.S. \$700,000 under this facility.
- v. On December 18, 2014, AGRO obtained a credit line of U.S. \$390,000, withdrawals from which bear interest at LIBOR plus 1.40%, and on the same date AGRO withdrew U.S. \$228,000, which matures on December 18, 2017.
- w. On December 19, 2014, Petróleos Mexicanos obtained a loan for Ps. 10,000,000 in two installments, the first for Ps. 5,000,000 and bearing interest at a floating rate of 91 days TIIE plus 125 basis points due 2025 and the second for Ps. 5,000,000 and bearing interest at a floating rate of TIIE plus 95 basis points with quarterly installments due 2025.
- x. On December 23, 2014, Petróleos Mexicanos obtained a loan for Ps. 10,000,000 bearing interest at a floating rate of TIIE plus 85 basis points with quarterly installments due 2025, which matures on March 19, 2025.
- z. From January 1 to December 31, 2014, PMI HBV obtained U.S. \$7,075,000 from its revolving credit line and repaid U.S. \$7,125,000.

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As of December 31, 2014, Petróleos Mexicanos had U.S. \$2,500,000 and Ps. 23,500,000 in available lines of credit in order to ensure liquidity, which were fully drawn.

Various financial transactions (including credit facilities and bond issuances) require compliance with various covenants that, among other things, place restrictions on the following types of transactions by PEMEX, subject to certain exceptions:

- The sale of substantial assets essential for the continued operations of its business.
- The incurrence of liens against its assets.
- Transfers, sales or assignments of rights to payment not yet earned under contracts for the sale of crude oil or natural gas, accounts receivable or other negotiable instruments.

As of December 31, 2015 and as of the date of the issuance of these consolidated financial statements, PEMEX was in compliance with the covenants described above.

As of December 31, 2015, long-term debt was as follows:

			December 31, 2015	
	Rate of interest <sup>(1)</sup>	Maturity	Pesos (thousands)	Foreign currency (thousands)
<b>U.S. dollars</b>				
Bonds	Fixed from 3.125 % to 9.5% and LIBOR plus 0.35% to 2.02%	Various to 2046	Ps. 727,841,896	U.S. \$ 42,300,404
Purchasing loans	LIBOR plus 0.8% to 0.85%	Various to 2016	75,192,405	4,370,000
Project financing	Fixed from 2.35% to 5.45% and LIBOR plus .01% to 1.71%	Various to 2021	81,621,345	4,743,634
Direct loans	Fixed at 5.44% and LIBOR plus 1.0%	Various to 2018	15,255,958	886,639
Syndicated loans	LIBOR plus 0.85%	Various to 20120	34,158,029	1,985,182
Bank loans	Fixed from 3.5% to 5.28%	Various to 2023	4,200,888	244,145
Financial leases (Note 10 -e)	Fixed from 0.38% to 5.28%	Various to 2023	9,214,921	535,549
Total financing in U.S. dollars			<u>947,485,442</u>	<u>U.S. \$ 55,065,553</u>
<b>Euros</b>				
Bonds	Fixed from 3.125% to 6.375%	Various to 2030	143,993,293	€ 7,653,433
Project financing	Fixed at 2%	Various to 2016	24	1
Total financing in Euros			<u>143,993,317</u>	<u>€ 7,653,434</u>
<b>Japanese yen:</b>				
Bonds	Fixed at 3.5% and LIBOR yen plus 0.75%	Various to 2023	13,432,600	¥ 94,000,000
Project financing	Fixed at 1.56% and Prime Rate yen plus 2.56%	Various to 2017	1,251,426	8,757,358
Total financing in yen			<u>14,684,026</u>	<u>¥ 102,757,358</u>
<b>Pesos</b>				
Certificados bursátiles	Mexican Federal Treasury Certificates ("Cetes"), TIIE <sup>(1)</sup> less 0.06% to 0.35%, and fixed at 7.19% to 9.15%	Various to 2026	185,777,844	
Direct loans	Fixed at 6.55% and TIIE plus 0.55% to 2.4%	Various to 2025	38,485,205	
Syndicated loans	TIIE plus 0.95	Various to 2025	43,437,901	
Revolved loans	TIIE plus 0.55	To 2016	14,400,000	
Total financing in pesos			<u>282,100,950</u>	

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	Rate of interest <sup>(1)</sup>	Maturity	December 31, 2015	
			Pesos (thousands)	Foreign currency (thousands)
<i>Unidades de Inversión Certificados bursátiles</i>				
Certificados bursátiles	Zero rate and Fixed at 3.02% to 5.23%	Various to 2035	51,964,883	
<b>Other currencies:</b>				
Bonds	Fixed from 2.5% to 8.25%	Various to 2022	26,357,327	
Total principal in pesos <sup>(2)</sup>			1,466,585,945	
Plus: accrued interest			18,488,522	
Notes payable to contractors <sup>(3)</sup>			8,307,368	
Total principal and interest			1,493,381,835	
Less: short-term maturities			169,342,715	
Current portion of notes payable to contractors <sup>(3)</sup>			4,677,431	
Accrued interest			18,488,522	
Total short-term debt and current portion of long-term debt			192,508,668	
<b>Long-term debt (Note 16(c))</b>			<u>Ps. 1,300,873,167</u>	

As of December 31, 2014, long-term debt was as follows:

	Rate of interest <sup>(1)</sup>	Maturity	December 31, 2014	
			Pesos (thousands)	Foreign currency (thousands)
<b>U.S. dollars</b>				
Bonds	Fixed from 1.7 % to 9.5% and LIBOR plus 0.43% to 2.02%	Various to 2045	Ps. 533,456,119	U.S. \$ 36,245,150
Purchasing loans	LIBOR plus 0.4% to 0.5%	Various to 2014	36,795,000	2,500,000
Project financing	Fixed from 2.45% to 5.45% and LIBOR plus .01% to 1.71%	Various to 2022	70,558,213	4,794,008
Direct loans	Fixed at 5.44% and LIBOR plus 1.0% to 1.20%	Various to 2018	24,959,247	1,695,831
Syndicated loans	LIBOR plus 0.8% and 1%	Various to 2016	29,436,000	2,000,000
Bank loans	Fixed from 3.5% to 5.28%	Various to 2022	4,076,281	276,959
Financial leases (Note 10(e))	Fixed from 0.37% to 1.99%	Various to 2023	3,873,174	263,159
Total financing in U.S. dollars			<u>703,154,034</u>	<u>U.S. \$ 47,775,107</u>
<b>Euros</b>				
Bonds	Fixed from 5.5% to 6.375%	Various to 2025	94,932,763	€ 5,304,804
Project financing	Fixed at 2%	Various to 2016	68	4
Total financing in Euros			<u>94,932,831</u>	<u>€ 5,304,808</u>
<b>Japanese yen:</b>				
Bonds	Fixed at 3.5% and LIBOR yen plus 0.75%	Various to 2023	11,533,800	¥ 94,500,615
Project financing	Fixed at 2.90% and Prime Rate yen plus 1% to 2%	Various to 2017	2,186,357	17,913,617
Total financing in yen			<u>13,720,157</u>	<u>¥ 112,414,232</u>
<b>Pesos</b>				
<i>Certificados bursátiles</i>	Mexican Federal Treasury Certificates ("Cetes") plus 0.57%, TIIE <sup>(1)</sup> less 0.07% to 0.7%, and fixed at 7.19% to 9.91%	Various to 2024	174,226,161	
Direct loans	Fixed at 6.55% and TIIE plus 0.55% to 2.4%	Various to 2022	24,186,813	
Syndicated loans	TIIE plus 0.95	Various to 2024	29,005,374	
Revolved loans	TIIE plus 0.55	To 2015	23,500,000	
Total financing in pesos			<u>250,918,348</u>	

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	Rate of interest <sup>(1)</sup>	Maturity	December 31, 2014	
			Pesos (thousands)	Foreign currency (thousands)
<i>Unidades de Inversión Certificados bursátiles</i>				
Certificados bursátiles	Zero rate and Fixed at 3.02% to 4.2%	Various to 2028	40,932,604	
<b>Other currencies:</b>				
Bonds	Fixed from 2.5% to 8.25%	Various to 2022	14,223,278	
Total principal in pesos <sup>(2)</sup>			1,117,881,252	
Plus: accrued interest				
			13,671,738	
Notes payable to contractors <sup>(3)</sup>			11,697,513	
Total principal and interest			1,143,250,503	
Less: short-term maturities			125,006,395	
Current portion of notes payable to contractors <sup>(3)</sup>			7,188,084	
Accrued interest			13,671,738	
Total short-term debt and current portion of long-term debt			145,866,217	
<b>Long-term debt (Note 16(c))</b>			<u>Ps. 997,384,286</u>	

	2016	2017	2018	2019	2020	2021 and thereafter	Total
Maturity of the total principal outstanding and accrued interest as of December 31, 2015, for each of the years ending December 31.	\$192,508,668	93,007,050	112,779,978	107,721,152	169,903,260	817,461,727	1,493,381,835

	December 31,	
	2015 <sup>(i)</sup>	2014 <sup>(i)</sup>
Changes in total debt:		
At the beginning of the year	Ps. 1,143,250,503	Ps. 841,240,414
Loans obtained—financing institutions	378,971,078	423,399,475
Loans obtained—financing lease	7,066,052	3,207,947
Debt payments	(191,318,841)	(207,455,492)
Accrued interest	67,773,593	50,909,624
Interest paid	(62,737,150)	(47,248,478)
Foreign exchange	152,676,257	78,884,717
Expenses related to debt issuance	(2,299,657)	312,296
<b>At the end of the year</b>	<u>Ps. 1,493,381,835</u>	<u>Ps. 1,143,250,503</u>

(i) These amounts include accounts payable by Financed Public Works Contracts ("FPWC") (formerly known as Multiple Services Contracts), which do not generate cash flows.

(1) As of December 31, 2015 and 2014, interest rates were as follows: 3 month LIBOR of 0.6127% and 0.2556%, respectively; 6 month LIBOR of 0.8461% and 0.3628%, respectively; the prime rate in Japanese yen, 1.475%, for the two years; THIE rate of 3.55% and 3.32%, respectively, for 28 days; THIE rate of 3.58% and 3.32%, respectively, for 91 days; Cetes rate of 3.05% and 2.74%, respectively, for 28 days; Cetes rate of 3.29% and 2.94%, respectively, for 91 days; Cetes rate of 3.58% and 3.01%, respectively, for 182 days.

(2) Includes financing from foreign banks of Ps. 1,123,936,915 and Ps. 798,484,400, as of December 31, 2015 and 2014, respectively.

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- (3) The total amounts of notes payable to contractors as of December 31, 2015 and 2014, current and long-term, are as follows:

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
Total notes payable to contractors <sup>(a)(b)</sup>	Ps. 8,307,368	Ps. 11,697,513
Less: current portion of notes payable to contractors	4,677,431	7,188,084
Notes payable to contractors (long-term)	<u>Ps. 3,629,937</u>	<u>Ps. 4,509,429</u>

- (a) PEMEX has entered into FPWCs pursuant to which the hydrocarbons and construction in progress are property of PEMEX. Pursuant to the FPWC, the contractors manage the work in progress, classified as development, infrastructure and maintenance. As of December 31, 2015 and 2014, PEMEX had an outstanding amount payable of Ps. 5,372,799 and Ps. 8,815,484, respectively.
- (b) During 2007, Pemex-Exploration and Production contracted for the purchase of a Floating Production Storage and Offloading ("FPSO") vessel. The investment in the vessel totaled U.S. \$723,575. As of December 31, 2015 and 2014, the outstanding balances owing to the contractor were Ps. 2,934,569 (U.S. \$170,550) and Ps. 2,882,029 (U.S. \$195,817), respectively. In accordance with the contract, the estimated future payments are as follows:

<b>Year</b>	<b>Amount</b>
2016	U.S. \$ 25,267
2017	25,267
2018	25,267
2019	25,267
2020	25,267
2021 and thereafter	44,215
<b>Total</b>	<u>U.S. \$ 170,550</u>

- (4) As of December 31, 2015 and 2014, PEMEX used the following exchange rates to translate the outstanding balances in foreign currencies to pesos in the statement of financial position:

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
U.S. dollar	\$17.2065	\$14.7180
Japanese yen	0.14290	0.1227
Pounds sterling	25.4983	22.9483
Euro	18.8084	17.8103
Swiss francs	17.3487	14.8122
Canadian dollar	12.4477	12.7061
Australian dollar	12.5538	12.0437

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**NOTE 16. DERIVATIVE FINANCIAL INSTRUMENTS**

PEMEX faces market risk caused by the volatility of hydrocarbon prices, exchange rates and interest rates, credit risk associated with investments and financial derivatives, as well as liquidity risk. In order to monitor and manage these risks, PEMEX has implemented general provisions regarding financial risk management, which are comprised of policies and guidelines that promote an integrated framework for risk management, regulate the use of derivative financial instruments (DFIs) and guide the development of risk mitigation strategies.

This regulatory framework establishes that DFIs should generally be used for the purpose of mitigating financial risk. The use of DFIs for any other purpose must be approved in accordance with PEMEX's internal regulation.

One of PEMEX's policies is to contribute to minimizing the impact of unfavorable changes that financial risk factors have on its financial results by promoting an adequate balance between expected incoming cash flows from operations and outgoing cash flows relating to its liabilities.

In addition, the PMI Group has implemented a regulatory framework for risk management with respect to its activities, consisting of policies, guidelines and procedures to manage the market risk associated with its commodity trading activities in accordance with industry best practices, such as: the use of DFIs for financial risk mitigation purposes; the segregation of duties; valuation and monitoring mechanisms, such as the generation of a daily portfolio risk report and value at risk (VaR) computation; and VaR limits, both at a global and business unit level, and the implementation of stop loss mechanisms. In addition, PMI-Trading also has its own risk management subcommittee which supervises the trading of DFIs.

**A. Risk Management****I. Market Risk***i. Interest rate risk*

PEMEX is exposed to fluctuations in floating interest rate liabilities. PEMEX is exposed to U.S. dollar LIBOR and to Mexican peso TIIE. As of December 31, 2015, approximately 25.8% of PEMEX's total net debt outstanding consisted of floating rate debt.

Occasionally, for strategic reasons or in order to offset the expected inflows and outflows, PEMEX has entered into interest rate swaps. Under its interest rate swap agreements, PEMEX acquires the obligation to make payments based on a fixed interest rate and is entitled to receive floating interest rate payments based on LIBOR, TIIE or a rate referenced to or calculated from TIIE.

As of December 31, 2015, PEMEX was a party to four interest rate swap agreements denominated in U.S. dollars for an aggregate notional amount of U.S. \$2,225,000 at a weighted average fixed interest rate of 2.35% and a weighted average term of 9.20 years.

Similarly, in order to eliminate the volatility associated with variable interest rates of long-term financing operations, PMI-NASA has executed interest rate swap agreements denominated in U.S. dollars for an outstanding aggregate notional amount of U.S. \$115,059, at a weighted average fixed interest rate of 4.16% and a weighted average term of 5.73 years.

Moreover, PEMEX invests in pesos and U.S. dollars in compliance with applicable internal regulations through portfolios that have different purposes that seek an adequate return subject to risk parameters that reduce the probability of capital losses. The objective of the investments made through these portfolios is to meet PEMEX's obligations payable in pesos and U.S. dollars.

The investments made through PEMEX's portfolios are exposed to domestic and international interest rate risk and credit spread risk derived from government and corporate securities, and inflation risk arising from the relationship between UDIs and pesos. However, these risks are mitigated by established limits on exposure to market risk.

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*ii. Exchange rate risk*

A significant amount of PEMEX's revenues is derived from exports of crude oil and petroleum products, which are priced and payable in U.S. dollars. Moreover, PEMEX's revenues from domestic sales of gasoline and diesel net of IEPS Tax, tax duties, incentives and other related taxes, petrochemicals and natural gas and its byproducts are related to international U.S. dollar-denominated prices, except for domestic sales of liquefied petroleum gas (LPG), which are priced in pesos and represent less than 5% of PEMEX's revenues.

PEMEX's expenses related to hydrocarbon duties are calculated based on international U.S. dollar-denominated prices and the cost of hydrocarbon imports that PEMEX acquires for resale in Mexico or use in its facilities are indexed to international U.S. dollar-denominated prices. By contrast, PEMEX's capital expenditure and operating expenses are determined in pesos.

As a result of this cash flow structure, the depreciation of the peso against the U.S. dollar increases PEMEX's financial balance. The appreciation of the peso relative to the U.S. dollar has the opposite effect. PEMEX manages this risk without the need for hedging instruments, because the impact on PEMEX's revenues of fluctuations in the exchange rate between the U.S. dollar and the peso is offset in whole or in part by its impact on its obligations.

Most of PEMEX's debt is denominated in U.S. dollars or pesos. Although PEMEX seeks to issue debt either in U.S. dollars or pesos, this is not always achievable. As a consequence of the cash flow structure described above, fluctuations in non-U.S. dollar currencies (other than pesos) may increase PEMEX's cost of funding due to the exposure to foreign exchange risk.

Since 1991, for non-U.S. dollar or peso issuances PEMEX has used, as a risk mitigation strategy, DFIs to swap this debt into U.S. dollars. In order to hedge inflation risk associated with debt denominated in UDIs, PEMEX swaps this debt into pesos, depending on market conditions. As a result of this strategy, PEMEX holds a debt portfolio with negligible sensitivity to currency risk other than pesos and U.S. dollars.

The underlying currencies of PEMEX's DFIs are the Euro, Swiss franc, Japanese yen, Pound Sterling and Australian dollar, which are each swapped against the U.S. dollar, and UDIs, which are swapped against the peso.

In 2015, PEMEX entered into various cross-currency swaps to hedge currency risk arising from debt obligations denominated in euros and Swiss francs for an aggregate notional amount of U.S. \$3,109,298 and the inflation risk arising from debt denominated in UDIs, for an aggregate notional amount of U.S. \$9,706,932. During 2015, PEMEX entered into the same kind of instruments to hedge currency risk arising from debt obligations denominated in euros, for an aggregate notional amount of U.S. \$1,388,400.

Most of PEMEX's cross-currency swaps are plain vanilla except for one swap entered into in 2004 to hedge its exposure to euro, with termination date in 2016. This swap is referred to as an "extinguishing swap" and was obtained in order to hedge long-term obligations. The main characteristic of extinguishing swaps is that these DFIs terminate upon the occurrence of any of the credit default events specified in the DFI contract confirmation, without any payment obligation by either party. This swap has a notional amount of U.S. \$1,146,410.

PEMEX recorded a total net foreign exchange loss of Ps. 154,765,574 in 2015, as compared to a total net foreign exchange loss of Ps. 76,999,161 in 2014 and to a total net foreign exchange loss of Ps. 3,951,492 in 2013, which includes the unrealized foreign exchange loss associated with debt of Ps. 152,554,454, Ps. 78,884,717 and Ps. 3,308,299 for the years ended December 31, 2015, 2014 and 2013, respectively. The depreciation of the peso caused a total net foreign exchange loss because a significant part of PEMEX's debt (77.9% as of December 31, 2015) is denominated in foreign currency. Unrealized foreign exchange losses and gains

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do not impact PEMEX's cash flows. Due to the cash flow structure described above, the depreciation of the peso relative to the U.S. dollar does not affect PEMEX's ability to meet U.S. dollar-denominated financial obligations and improves PEMEX's ability to meet peso-denominated financial obligations. On the other hand, the appreciation of the peso relative to the U.S. dollar may increase PEMEX's peso debt service costs on a U.S. dollar basis. PEMEX's foreign exchange loss in 2015 was due to the depreciation of the peso, from Ps. 14.7180 = U.S. \$1.00 on December 31, 2014 to Ps. 17.2065 = U.S. \$1.00 on December 31, 2015. PEMEX's foreign exchange loss in 2014 was due to the depreciation of the peso, from Ps. 13.0765 = U.S. \$1.00 on December 31, 2013 to Ps. 14.7180 = U.S. \$1.00 on December 31, 2014. PEMEX's foreign exchange loss in 2013 was due to the depreciation of the peso, from Ps. 13.0101 = U.S. \$1.00 on December 31, 2012 to Ps. 13.0765 = U.S. \$1.00 on December 31, 2013.

The PMI Group also faces market risks generated by fluctuations in foreign exchange rates. In order to mitigate these risks, the boards of directors of several of the companies that form the PMI Group have authorized a policy which stipulates that no more than 5% of a company's total financial assets may be denominated in a currency other than its functional currency, unless the company owes a duty or expected payment in a currency other than its functional one. Accordingly, the companies in the PMI Group will from time to time enter into DFIs in order to mitigate the risk associated with financing operations denominated in currencies other than a company's functional currency.

Finally, a significant amount of PMI Trading's income and expenses, including the cost of sales and related sales costs, is derived from the trade of refined products, petrochemicals and gas liquids to PEMEX subsidiaries and third parties, whose prices are determined and are payable in U.S. dollars. PMI Trading's exposure to foreign currency risk results primarily from the need to fund tax payments denominated in domestic currency and secondarily from the need to purchase products in domestic currency for sale in U.S. dollars in the international market, as well as certain related sales costs denominated in domestic currency.

PMI Trading believes it can adequately manage the risk created by the payment of taxes in domestic currency without the need to enter into hedging instruments because the exposure to this risk is marginal relative to the total flows of U.S. dollar. In addition, in the event that a potential foreign exchange risk arises in connection with a commercial transaction, PMI Trading may implement risk mitigation measures by entering into DFIs.

*iii. Hydrocarbon Price Risk*

PEMEX periodically assesses its revenues and expenditures structure in order to identify the main market risk factors that PEMEX's cash flows are exposed to in connection with international hydrocarbon prices. Based on this assessment, PEMEX monitors its exposure to the most significant risk factors and quantifies their impact on PEMEX's financial balance.

PEMEX continuously evaluates the implementation of financial risk mitigation strategies, including the use of DFIs, while taking into account operational and economic constraints.

Pemex Industrial Transformation's domestic sales of LPG have been subject to a price control mechanism imposed by the Mexican Government. This mechanism generates a risk exposure in the geographic areas where PEMEX sells imported LPG. In 2015, PEMEX entered into various swaps in order to hedge the risk arising from the variations of the propane import price. These DFIs were held over a percentage of the total volume of importation and with maturity dates from March 31, 2015 to December 31, 2015. The transactions that matured on December 31, 2015, were settled in January 2016. Although PEMEX entered into these contracts with economic hedging purposes, for accounting purposes, these DFIs do not qualify as hedges and were recorded as trading instruments in the financial statements.

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In addition to supplying natural gas, Pemex Industrial Transformation offers DFIs to its domestic customers in order to provide them with support to mitigate the risk associated with the volatility of natural gas prices. Pemex Industrial Transformation enters into DFIs with Mex Gas Supply, S.L. under the opposite position to those DFIs offered to its customers in order to mitigate the market risk it bears under such offered DFIs. Mex Gas Supply, S.L. then transfers the related price risk derived from the DFI position held with Pemex Industrial Transformation to international financial counterparties by entering into these opposite position DFIs with such parties. Through the above mechanism, Pemex Industrial Transformation maintains a negligible or even null exposure to market risk.

PMI Trading faces market risk generated by the terms of the purchase and sale of refined products and natural gas liquids, as well as the volatility of oil prices. Accordingly, it frequently enters into DFIs in order to mitigate this risk, thereby reducing the volatility of its financial results.

*iv. Risks relating to the portfolio of third-party shares*

As of December 31, 2015 Petróleos Mexicanos does not hold any third-party shares and, therefore, does not hold any related DFIs. On May 2014, PEMEX held a synthetic long position on 67,969,767 shares of Repsol, with the objective of maintaining corporate and economic rights over these shares. PEMEX accomplished this by using a total return swap under which PEMEX paid variable amounts and received a total return on the Repsol shares. Under this DFI, PEMEX was entitled to any capital gains associated with the Repsol shares and agreed to cover its counterparties for any capital losses relating to those shares in reference to an exercise price, as well as to make payments at a floating interest rate. On June 3, 2014, PEMEX made an early termination of its DFI. Following this termination, Petróleos Mexicanos no longer directly participates in Repsol.

As of December 31, 2015, PMI HBV owned 20,724,331 Repsol. shares and P.M.I. Holdings Petróleos España, S.L. holds one for a total of 20,724,332 shares. These shares have no related DFI.

*v. Market risk quantification*

The quantification of market risk exposure in PEMEX's financial instruments is presented below, in accordance with the applicable international risk management practices.

Interest rate risk quantification

The quantification of interest rate risk of investment portfolios is carried out by using the one-day horizon historical VaR, with a confidence level of 95%, over a period of one year. The VaR incorporates interest rate and spread risks. In addition, for portfolios in domestic currency, the VaR includes the inflation risk embedded in securities denominated in UDI. For portfolio management purposes, interest rate risk is mitigated by VaR limits.

As of December 31, 2015, the VaR of PEMEX's investment portfolios was Ps. (49.9) for the Peso Treasury Portfolio, Ps. (20.0) for the Fondo Laboral Pemex Portfolio ("FOLAPE"), Ps. (36.6) for the Fideicomiso de Cobertura Laboral y de Vivienda Portfolio ("FICOLAVI"), and U.S. \$0 for the U.S. Dollar Treasury Portfolio.

In addition to the exposure to interest rate fluctuations of the DFIs in which PEMEX is obligated to pay floating rates, PEMEX's DFIs are exposed to mark-to-market (MtM) volatility as a result of changes in the interest rate curves used in their valuation.

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Interest rate risk quantification was calculated for DFIs in conjunction with the interest rate risk quantification for the debt portfolio. The following table shows the sensitivity of PEMEX's DFIs and debt portfolio to a parallel shift of 10 basis points (bp) over the zero coupon rate curves. For the debt portfolio, interest rate risk sensitivity was calculated taking into account both the DFI interbank market yield curves and the PEMEX curves (which were also used to estimate the debt portfolios' fair value). These metrics were calculated solely for informational purposes and are not used for portfolio management purposes because PEMEX does not intend to prepay its debt or terminate its DFIs early. Therefore, there is no interest rate risk arising from fixed rate obligations.

**INTEREST RATE and CURRENCY DFIs**

Interest rate sensitivity to + 10 bp

Currency	Interbank Yield Curves			PEMEX Curves
	Sensitivity debt	Sensitivity DFIs	Sensitivity net	Sensitivity debt
AUD	151,050	(151,050)	—	145,408
CHF	4,430,119	(4,430,119)	—	3,751,395
Euro	61,681,142	(61,681,141)	1	39,099,792
Pound Sterling	3,987,637	(3,987,637)	—	3,143,530
Yen	2,703,445	(2,703,445)	—	1,794,172
Peso	70,432,386	3,621,130	74,053,516	58,288,262
UDI	21,388,896	(12,492,629)	8,896,267	16,686,825
U.S. dollar	609,336,323	76,895,099	686,231,422	260,306,570

Amounts in U.S. dollars

In addition, PEMEX performed a retrospective sensitivity analysis of the impact on its financial statements for the years ended December 31, 2015, 2014 and 2013, in which PEMEX assumed either an increase or decrease of 25 basis points in the floating interest rates of its debt and corresponding hedges.

At December 31, 2015, 2014 and 2013, had market interest rates been 25 basis points higher, with all other variables remaining constant, net income for the year would have been Ps. 922,268, Ps. 7,297,773 and Ps. 4,993,915 lower for December 31, 2015, 2014 and 2013, respectively, primarily as a result of an increase in interest expense. Conversely, had market interest rates been 25 basis points lower, net income for the year would have been Ps. 922,268, Ps. 7,297,773 and Ps. 4,993,915 greater at December 31, 2015, 2014 and 2013, respectively, primarily as a result of a decrease in interest expense.

Exchange rate risk quantification

The investments of PEMEX's portfolios do not face foreign exchange risk because the funds of such portfolios are used to meet obligations in pesos and U.S. dollars.

Currency DFIs are entered into in order to hedge exchange rate risk arising from debt flows in currencies other than pesos and U.S. dollars or inflation risk arising from debt flows in UDIs. However, due to the accounting treatment, net income is exposed to mark-to-market volatility as a result of changes in the exchange rates used in their valuation.

Exchange rate risk quantification was calculated for DFIs in conjunction with the exchange rate risk quantification for the debt portfolio. The following table shows the sensitivity of PEMEX's DFIs and debt portfolio to an increase of 1% to the exchange rates of currencies against the U.S. dollar. For the debt portfolio, exchange rate risk sensitivity was calculated taking into account both, interbank market yield curves and the PEMEX curves. In addition, the table shows the one-day horizon historical VaR of the remaining open position, with a confidence level of 95%, over a period of one year. These metrics were calculated solely for informational purposes. Nevertheless, in order to carry out management activities related to its debt portfolio, PEMEX periodically conducts quantitative analyses in order to estimate the exchange rate risk exposure generated by its debt issuances. Based on these analyses, PEMEX has elected to enter into DFIs as an exchange rate risk mitigation strategy.

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**INTEREST RATE and CURRENCY DFIs**

<u>Currency</u>	<u>Interbank Yield Curves</u>			<u>VaR 95% Net</u>	<u>PEMEX Curves</u>
	<u>1% Debt</u>	<u>1% DFIs</u>	<u>1% Net</u>		<u>1% Debt</u>
AUD	(1,192,620)	1,192,620	—	—	(1,161,191)
CHF	(10,262,633)	10,262,633	—	—	(8,916,585)
Euro	(103,249,036)	103,249,021	(14)	(18)	(79,281,667)
Pound sterling	(7,554,817)	7,554,817	—	—	(6,258,034)
Yen	(9,814,169)	9,814,169	—	—	(8,167,138)
Peso	(207,497,070)	(21,162,833)	(228,659,903)	(255,774,027)	(191,060,442)
UDI	(30,093,443)	21,589,615	(8,503,828)	(9,398,832)	(26,129,535)

Amounts in U.S. dollars

As shown in the table above, DFIs mitigate 100% of the exchange rate risk derived from debt denominated in currencies other than pesos and U.S. dollars.

In addition, PEMEX performed a retrospective sensitivity analysis of the impact on its financial statements of the years ended December 31, 2015, 2014 and 2013, in which PEMEX assumed either an increase or decrease of 10% in the exchange rate between the U.S. dollar and peso in order to determine the impact on net income and equity as a result of applying these new rates to the monthly balances of assets and liabilities denominated in U.S. dollars.

At December 31, 2015, 2014 and 2013, had the peso depreciated against the U.S. dollar by 10% with other variables remaining constant, net income would have been Ps.105,915,340, Ps. 70,280,300 and Ps. 55,137,410 lower, respectively, primarily as a result of an increase in the exchange rate losses. However, had the peso appreciated against the U.S. dollar by 10%, net income for the period would have increased by Ps.105,915,340, Ps. 70,280,300 and Ps. 55,137,410, respectively, primarily as a result of the decrease in exchange rate losses.

Quantification of risks related to third-party shares

Shares are exposed to price risk and euro/U.S. dollar exchange rate risk. The quantification of these risks was carried out using the one-day horizon historical VaR, with a confidence level of 95%, over a period of one year, of Repsol's share price in euros converted to U.S. dollars. In addition, the MtM sensitivity to an increase of 1% in the euro/U.S. dollar exchange rate is provided for informational purposes.

**EQUITY DFIs**

<u>Currency</u>	<u>Shares</u>	<u>Equity risk Shares value</u>	<u>VaR EQ</u>	<u>FX risk 1%</u>
Euro	20,724,332	227,808,976	(7,619,719)	335,422

Amounts in U.S. dollars

Hydrocarbon price risk quantification

Pemex Industrial Transformation occasionally faces market risk due to open positions arising from the mismatch between the DFI portfolio offered to domestic customers and hedges with international counterparties. As of December 31, 2015, Pemex Industrial Transformation's natural gas DFI portfolio had no market risk exposure.

Market risk exposure is measured using the 20-day Delta-Gamma VaR methodology, with a confidence level of 95%, based on 500 daily observations; VaR and Capital at Risk (CaR) are monitored and mitigated by pre-established limits.

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It should be noted that sensitivity analyses were not carried out for other financial instruments, such as accounts receivable and payable (as defined in the financial reporting standards). Such accounts are cleared in short term, and therefore market risk is considered to be nonexistent. Most of these accounts are related to hydrocarbon prices.

In accordance with the risk management regulatory framework that PMI Trading has implemented, VaR and the change in profit and loss by portfolio are calculated daily and compared to the maximum applicable limits in order to implement risk mitigation mechanisms as necessary.

PMI Trading's global average VaR associated with commodities market risk was U.S. \$(13,550) as of December 31, 2015. This VaR was calculated using the historical method with a 99% confidence level, two-year history and a one-day horizon. The minimum VaR recorded on the year was U.S. \$(4,999) (registered on September 18, 2015) and the maximum VaR recorded on the year was U.S. \$(21,793) (registered on July 30, 2015). As of December 31, 2014, the global VaR was US \$(12,194).

## **II. Credit Risk**

When the fair value of a DFI is favorable to PEMEX, PEMEX faces the risk that the counterparty will not be able to meet its obligations. PEMEX monitors the creditworthiness of its counterparties and calculates the credit risk exposure for its DFIs. As a risk mitigation strategy, PEMEX only enters into DFIs with major financial institutions with a minimum credit rating of BBB-. These ratings are issued and revised periodically by risk rating agencies. Furthermore, PEMEX seeks to maintain a diversified portfolio of counterparties.

Moreover, PEMEX has entered into various long-term cross-currency swaps agreements with "recouping" provisions (pursuant to which the payments on the swaps are adjusted when the mark-to-market exceeds the relevant threshold specified in the swap), thereby limiting the exposure with its counterparties to a specific threshold amount. The specified thresholds were reached in nine cross-currency swaps from the first to the fourth quarter of 2015, which were used to hedge the exchange rate exposure to the euro and to the Australian dollar, and in three cross-currency swaps during 2014, which were used to hedge the exchange rate exposure to the euro and the Pound sterling. This resulted in the cash settlement of such swaps and the resetting of swap terms to return their mark-to-market value to zero. In addition, during 2015, PEMEX entered into one cross-currency swap in euros with these characteristics.

According to IFRS 13 "Fair Value Measurement," the fair value or MtM value of DFIs must reflect the creditworthiness of the parties. Consequently, the fair value of a DFI takes into account the risk that either party may default on its obligation. In accordance with market best practices, PEMEX applies the credit value adjustment ("CVA") method to calculate the fair value of its DFIs.

For each DFI, the CVA is calculated by determining the difference between the MtM and the estimated MtM adjusted for credit risk. In determining the credit risk, the CVA method takes into account the current market perception about the credit risk of both counterparties, using the following inputs: a) the MtM projection for each payment date based on forward yield curves; b) the implied default probability obtained for both, PEMEX and the counterparty, at each payment date; and c) the default recovery rates of each counterparty.

In addition, in order to estimate the credit risk exposure to each financial counterparty, the potential future exposure was calculated by projecting the risk factors used in the valuation of each DFI in order to calculate the MtM value for different periods, taking into account any credit risk mitigation provisions.

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The current and potential exposures, aggregated by credit rating, are as follows:

**Maximum Credit Exposure by term in Petróleos Mexicanos**

<u>Rating</u>	<u>Current</u>	<u>Less than 1 year</u>	<u>1-3 years</u>	<u>3-5 years</u>	<u>5-7 years</u>	<u>7-10 years</u>	<u>More than 10 years</u>
A+	—	6	92	107	119	3	—
A	—	130	402	632	503	143	—
A-	—	155	236	259	264	249	189
BBB+	—	296	882	997	873	943	596
BBB	—	65	71	82	97	113	—

In millions of U.S. dollars

PEMEX does not consider the propane swaps entered into during 2015 as credit risk exposure given that they matured on December 31, 2015 and settled seven days after, in favor of the financial counterparties.

PEMEX also faces credit risk derived from its investments. As of December 31, 2015, the notional amounts of investments in domestic currency, organized by the credit ratings of the issuances, were as follows:

<u>Credit rating of issuances*</u>	<u>Notional amount (In millions of pesos)</u>
mxAAA	310.60

\* Minimum S&P, Moody's and Fitch credit rating.  
National Credit Rating Scale.  
Does not include investments in Mexican Government bonds.

The table above does not include domestic currency Mexican Government bonds because these issuances are considered not to carry default risk in this currency.

As of December 31, 2015, PEMEX held an investment in a note linked to United Mexican States' credit risk that was issued by a U.S. financial institution with a BBB+ credit rating. This note matures in June 2016 and has a face value of U.S. \$108,000. PEMEX periodically monitors the issuer's credit rating, as well as the credit rating of the underlying assets, in order to quantify its exposure to the note's embedded credit risk.

Furthermore, by means of its credit guidelines for DFI operations, Pemex Industrial Transformation has significantly reduced its credit risk exposure related to the DFIs offered to its customers to assist them in mitigating the risk associated with the volatility of natural gas.

In order to qualify for these DFIs, Pemex Industrial Transformation's customers must be party to a current natural gas supply contract and sign a domestic master derivative agreement.

Additionally, beginning on October 2, 2009, DFIs with these customers must be initially secured by cash deposits, letters of credit or other collateral provisions, as required. In accordance with these guidelines, in the event that a client does not meet its payment obligations, DFIs related to this client are terminated, rights to collateral are exercised and, if the collateral is insufficient to cover the fair value, natural gas supply is suspended until the payment is made.

On August 20, 2014, certain amendments to the credit guidelines were enacted, which allowed Pemex-Gas and Petrochemicals, and now Pemex Industrial Transformation, to offer to its clients with an adequate credit rating, based on an internal financial and credit assessment, DFIs with an exemption from collateral requirements up to certain amount through a credit line approved by the credit committee. Moreover, if the credit line is insufficient to cover each client's exposure, the client is obligated to deposit collateral. If a client suffers an event of default, DFIs related to this client are terminated early and natural gas supply is suspended until the payment is made.



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As of December 31, 2015, Pemex Industrial Transformation's DFIs had a fair value of U.S. \$24,566 (deferred premiums included) for clients with exempted credit lines and U.S. \$50,506 for clients with guaranteed credit lines. The total amount of exempt credit lines rose to U.S. \$3,014,142, representing 1% usage of available exempt credit lines, while the total amount of guaranteed credit lines rose to U.S. \$95,165, representing a 53% usage of available guaranteed credit lines.

As of December 31, 2015, the overdue accounts of natural gas customers in the industrial and distribution sectors accounted for less than 1.00% of the total sales of Pemex Industrial Transformation.

As of December 31, 2015, Pemex Industrial Transformation had open DFIs with 29 customers, of which 21 are industrial customers (73%), 7 are distributors (24%), and one is both an industrial customer and a distributor (3%). Of the total volume (in millions of British thermal units or MMBtu) of DFIs, industrial customers represented 72%, distributor customers represented 23%, and the customers belonging to both categories represented 5%.

As of December 31, 2015, Pemex Industrial Transformation and as of December 31, 2014, Pemex-Gas and Basic Petrochemicals, through the subsidiary Mex Gas Supply, S.L., had not provided any collateral for DFIs entered into to hedge its DFIs with customers. This was due to the following: (i) natural gas prices maintained levels below the strike price, which has kept the credit limits within the set limits; and (ii) when certain DFIs matured, Pemex-Gas and Basic Petrochemicals, and now Pemex Industrial Transformation, had used domestic customers' payments to meet its international obligations.

The potential future exposure of Mex Gas Supply, S.L.'s DFI portfolio was calculated in a manner analogous to the analysis of Petróleos Mexicanos' DFI positions. The current and potential exposure, aggregated by credit rating, is as follows:

**Maximum Credit Exposure by term in Pemex Industrial Transformation**

<b>Rating</b>	<b>Current</b>	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>3-5 years</b>	<b>5-7 years</b>	<b>7-10 years</b>	<b>More than 10 years</b>
A	2.20	2.20	1.29	—	—	—	—
A-	4.74	4.63	4.41	0.005	—	—	—
BBB+	—	—	—	—	—	—	—
BBB-	0.03	0.03	0.02	—	—	—	—

In millions of U.S. dollars

PMI Trading's credit risk associated with DFI transactions is mitigated through the use of futures and standardized instruments that are cleared through CME-Clearport.

### III. Liquidity Risk

Through its debt planning and U.S. dollar selling operations, PEMEX currently preserves cash balance at a level of liquidity in domestic currency and U.S. dollars that is considered adequate to cover its investment and operating expenses, as well as other payment obligations.

In addition, PEMEX has acquired committed revolving credit lines in order to mitigate liquidity risk, two of which provide access to Ps. 3,500,000 and Ps. 20,000,000 with expiration dates in June and November 2019, respectively; and two others that each provides access to U.S. \$1,250,000 and U.S. \$3,250,000 with expiration dates in December 2016 and January 2020, respectively.

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Finally, the investment strategies of PEMEX's portfolios are structured by selecting time horizons that consider each currency's cash flow requirements in order to preserve liquidity.

The PMI Group mitigates the liquidity risk within its companies through several mechanisms, the most important of which is the centralized treasury or "in-house bank," which provides access to a syndicated credit line for up to U.S. \$700,000 and cash surplus capacity in the custody of the centralized structure. In addition, the companies in the PMI Group have access to bilateral credit lines from financial institutions for up to U.S. \$850,000.

The companies in the PMI Group monitor their cash flow on a daily basis and protect their creditworthiness in the financial markets. Liquidity risk is mitigated by monitoring the maximum/minimum permissible financial ratios as set forth in the policies approved by each company's board of directors.

The following tables show the cash flow maturities as well as the fair value of PEMEX's debt and DFI portfolios as of December 31, 2015 and 2014. It should be noted that:

- For debt obligations, these tables present principal cash flow and related weighted average interest rates for fixed rate debt.
- For interest rate and cross currency swaps, these tables present notional amounts and weighted average interest rates by expected (contractual) maturity dates.
- Weighted average variable rates are based on implied forward rates obtained from the interbank market yield curve at the reporting date.
- For natural gas DFIs, volumes are presented in millions of British thermal unit (MMBtu), and fixed average and strike prices are presented in U.S. dollars per MMBtu.
- A DFI's fair value includes CVA and is calculated based on market quotes obtained from market sources such as Reuters and Bloomberg. Forward curves for natural and propane gas are supplied by the KiodeX Risk Workbench platform.
- For PMI Trading, prices used in commercial transactions and DFIs are published by reputable sources that are widely used in international markets, such as CME-NYMEX, Platts and Argus, among others.
- Fair value is calculated internally, by discounting cash flows with the corresponding zero-coupon yield curve, in the original currency.
- For all instruments, tables are based on the contract terms in order to determine the future cash flows that are categorized by expected maturity dates.

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
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This information is presented in thousands of pesos, except as noted.

**Quantitative Disclosure of Debt Cash Flow's Maturities as of December 31, 2015<sup>(1)</sup>**

	Year of expected maturity date						Total carrying value	Fair value
	2016	2017	2018	2019	2020	2021 thereafter		
<b>Liabilities</b>								
Outstanding debt								
Fixed rate (U.S. dollars)	Ps 12,829,312	Ps11,855,937	Ps 82,984,743	Ps 52,181,092	Ps 50,502,077	Ps528,285,394	Ps 738,638,554	Ps 693,943,114
Average interest rate (%)							5.3598%	
Fixed rate (Japanese yen)	834,293	417,133	—	—	—	4,287,000	5,538,426	5,606,358
Average interest rate (%)							3.1698%	
Fixed rate (Pounds)	—	—	—	—	—	8,885,952	8,885,952	10,767,887
Average interest rate (%)							8.2500%	
Fixed rate (pesos)	7,500,000	—	—	—	10,064,778	110,946,135	128,510,914	176,496,022
Average interest rate (%)							7.5851%	
Fixed rate (UDIs)	—	—	—	16,754,153	4,318,678	30,892,053	51,964,883	44,959,784
Average interest rate (%)							5.3275%	
Fixed rate (euros)	15,987,190	22,513,392	—	—	24,308,184	81,184,552	143,993,317	136,416,000
Average interest rate (%)							4.0517%	
Fixed rate (Swiss Francs)	—	—	—	5,200,092	10,391,550	—	15,591,642	15,342,323
Average interest rate (%)							1.8335%	
Fixed rate (Australian dollars)	—	1,879,733	—	—	—	—	1,879,733	1,998,003
Average interest rate (%)							6.1250%	
Total fixed rate debt	<u>37,150,795</u>	<u>36,666,195</u>	<u>82,984,743</u>	<u>74,135,337</u>	<u>99,585,266</u>	<u>764,481,085</u>	<u>1,095,003,422</u>	<u>1,085,529,491</u>
Variable rate (U.S. dollars)	98,054,813	26,444,912	21,175,683	10,682,902	42,961,127	17,834,819	217,154,256	211,799,779
Variable rate (Japanese yen)	—	—	—	—	9,145,600	—	9,145,600	8,446,427
Variable rate (euros)	—	—	—	—	—	—	—	—
Variable rate (pesos)	<u>38,814,538</u>	<u>29,895,944</u>	<u>8,619,552</u>	<u>22,902,913</u>	<u>18,211,267</u>	<u>35,145,822</u>	<u>153,590,036</u>	<u>152,252,128</u>
Total variable rate debt	<u>136,869,351</u>	<u>56,340,855</u>	<u>29,795,235</u>	<u>33,585,815</u>	<u>70,317,994</u>	<u>52,980,641</u>	<u>379,889,891</u>	<u>372,498,334</u>
<b>Total debt</b>	<u>174,020,146</u>	<u>93,007,050</u>	<u>112,779,978</u>	<u>107,721,152</u>	<u>169,903,260</u>	<u>817,461,726</u>	<u>1,474,893,313</u>	<u>1,458,027,825</u>

Note: Numbers may not total due to rounding.

(1) The information in this table has been calculated using exchange rates at December 31, 2015 of: Ps. 17.2065 = U.S. \$1.00; Ps. 0.1429 = 1.00 Japanese yen; Ps. 25.49831 = 1.00 Pound sterling; Ps. 5.381175 = 1.00 UDI; Ps. 18.80843 = 1.00 euro; Ps. 17.34876 = 1.00 Swiss Franc; and Ps. 12.55386 = 1.00 Australian dollar.

Source: PEMEX

**Quantitative Disclosure of Debt Cash Flow's Maturities as of December 31, 2014<sup>(1)</sup>**

	Year of expected maturity date						Total carrying value	Fair value
	2015	2016	2017	2018	2019	2020 thereafter		
<b>Liabilities</b>								
Outstanding debt								
Fixed rate (U.S. dollars)	Ps. 16,728,447	Ps. 9,754,046	Ps. 8,932,318	Ps.66,056,363	Ps.43,283,777	Ps.399,972,649	Ps. 544,727,601	Ps. 597,587,661
Average interest rate (%)							5.4507%	
Fixed rate (Japanese yen)	1,111,829	716,360	358,168	—	—	3,681,000	5,867,357	6,421,171
Average interest rate (%)							3.0135%	
Fixed rate (Pounds)	—	—	—	—	—	7,986,601	7,986,601	10,870,607
Average interest rate (%)							8.2500%	
Fixed rate (pesos)	9,500,000	7,499,440	—	—	—	98,350,797	115,350,237	121,070,263
Average interest rate (%)							7.7995%	
Fixed rate (UDIs)	—	—	—	—	16,409,158	24,523,446	40,932,604	38,334,284
Average interest rate (%)							3.6724%	
Fixed rate (euros)	46	15,138,824	21,288,275	—	—	58,505,732	94,932,831	107,661,041
Average interest rate (%)							4.7485%	
Fixed rate (Swiss Francs)	—	—	—	—	4,435,390	—	4,435,390	4,761,383
Average interest rate (%)							2.5000%	
Fixed rate (Australian dollars)	—	—	1,801,286	—	—	—	1,801,286	1,971,766
Average interest rate (%)							6.1250%	
Total fixed rate debt	<u>27,340,322</u>	<u>33,108,623</u>	<u>32,380,048</u>	<u>66,056,363</u>	<u>64,128,326</u>	<u>593,020,226</u>	<u>816,033,908</u>	<u>888,678,175</u>
Variable rate (U.S. dollars)	67,764,296	45,481,570	18,479,304	16,551,669	7,677,480	14,169,627	170,123,946	169,384,354
Variable rate (Japanese yen)	—	—	—	—	—	7,852,800	7,852,800	8,201,784
Variable rate (euros)	—	—	—	—	—	—	—	—
Variable rate (pesos)	<u>37,089,861</u>	<u>15,502,367</u>	<u>27,858,740</u>	<u>4,463,415</u>	<u>19,050,557</u>	<u>31,603,172</u>	<u>135,568,111</u>	<u>138,230,313</u>
Total variable rate debt	<u>104,854,156</u>	<u>60,983,937</u>	<u>46,338,044</u>	<u>21,015,084</u>	<u>26,728,037</u>	<u>53,625,599</u>	<u>313,544,857</u>	<u>315,816,451</u>
<b>Total debt</b>	<u>132,194,479</u>	<u>94,092,560</u>	<u>78,718,092</u>	<u>87,071,447</u>	<u>90,856,363</u>	<u>646,645,825</u>	<u>1,129,578,765</u>	<u>1,204,494,626</u>

Note: Numbers may not total due to rounding.

(1) The information in this table has been calculated using exchange rates at December 31, 2014 of: Ps. 14.7180 = U.S. \$1.00; Ps. 0.1227 = 1.00 Japanese yen; Ps. 22.9483 = 1.00 Pound sterling; Ps. 5.270368 = 1.00 UDI; Ps. 17.8103 = 1.00 euro; Ps. 14.8122 = 1.00 Swiss Franc; and Ps. 12.0437 = 1.00 Australian dollar.

Source: PEMEX

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**Quantitative Disclosure of Cash Flow's Maturities from Derivative Financial Instruments Held or Issued for Purposes Other than Trading as of December 31, 2015<sup>(1) (2)</sup>**

	Year of Expected Maturity Date						Total notional amount	Fair value <sup>(3)</sup>
	2016	2017	2018	2019	2020	Thereafter		
<b>Hedging instruments<sup>(2)(4)</sup></b>								
<b>Interest rate DFIs</b>								
Interest rate swaps (U.S. dollars)								
Variable to fixed	Ps. 4,069,129	Ps. 4,079,836	Ps. 4,090,743	Ps. 4,102,179	Ps. 4,113,949	Ps. 16,869,943	Ps. 37,325,780	Ps. (192,666)
Average pay rate	2.09%	2.40%	3.05%	3.47%	3.82%	4.25%	N.A.	N.A.
Average receive rate	2.93%	2.97%	3.00%	3.02%	3.06%	3.24%	N.A.	N.A.
Interest rate swaps (pesos)								
Variable to fixed								
Average pay rate	—	—	—	—	—	—	—	—
Average receive rate	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Currency DFIs</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Cross-currency swaps								
Receive euros/Pay U.S. dollars	19,725,704	28,956,612	—	—	30,263,050	83,793,246	162,738,612	(19,088,133)
Receive Japanese yen/ Pay U.S. dollars	887,184	443,581	—	—	14,736,383	4,152,816	20,219,963	(5,419,164)
Receive Pounds sterling/ Pay U.S. dollars	—	—	—	—	—	10,951,197	10,951,197	(693,597)
Receive UDI/Pay pesos	—	—	—	16,105,371	3,540,220	16,236,097	35,881,688	294,255
Receive Swiss francs/Pay U.S. dollars	—	—	—	5,653,336	10,042,704	—	15,696,040	(281,999)
Receive Australian dollars/Pay U.S. dollars	—	2,047,918	—	—	—	—	2,047,918	(46,526)
Exchange rate forward								
Receive euros/Pay U.S. dollars	—	—	—	—	—	—	—	—

N.A. = not applicable.

Numbers may not total due to rounding.

(1) The information in this table has been calculated using the exchange rate at December 31, 2015 of: Ps. 17.20650 = U.S. \$1.00 and Ps. 18.80843 = 1.00 euro.

(2) PEMEX's management uses these DFIs to hedge market risk; however, these DFIs do not qualify for accounting purposes as hedges and are recorded in the financial statements as entered into for trading purposes.

(3) Positive numbers represent a favorable fair value to PEMEX.

(4) PMT's risk management policies and procedures establish that DFIs should be used only for hedging purposes; however DFIs are not recorded as hedges for accounting purposes.

Source: PEMEX

**Quantitative Disclosure of Cash Flow's Maturities from Derivative Financial Instruments Held or Issued for Purposes Other than Trading as of December 31, 2014<sup>(1) (2)</sup>**

	Year of expected maturity date						Total notional amount	Fair value <sup>(4)</sup>
	2015	2016	2017	2018	2019	Thereafter		
<b>Hedging instruments<sup>(2)(4)</sup></b>								
<b>Interest rate DFIs</b>								
Interest rate swaps (U.S. dollars)								
Variable to fixed	Ps. 1,668,708	Ps. 2,045,007	Ps. 2,053,963	Ps. 2,063,326	Ps. 2,073,034	Ps. 9,359,006	Ps. 19,263,046	Ps. (257,303)
Average pay rate	1.28%	1.78%	2.51%	2.95%	3.11%	3.25%	N.A.	N.A.
Average receive rate	2.38%	2.39%	2.38%	2.38%	2.38%	2.39%	N.A.	N.A.
Interest rate swaps (pesos)								
Variable to fixed	—	—	—	—	—	—	—	—
Average pay rate	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Average receive rate	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Currency DFIs</b>								
Cross-currency swaps								
Receive euros/Pay U.S. dollars	—	16,872,862	25,284,126	—	—	66,034,677	108,191,665	(11,254,375)
Receive Japanese yen/ Pay U.S. dollars	1,211,734	758,874	379,428	—	—	16,157,337	18,507,373	(5,064,532)
Receive Pounds sterling/ Pay U.S. dollars	—	—	—	—	—	9,367,374	9,367,374	61,391
Receive UDI/ Pay pesos	—	—	—	—	16,105,371	10,069,386	26,174,756	1,002,353
Receive Swiss francs/ Pay U.S. dollars	—	—	—	—	4,835,719	—	4,835,719	(306,266)
Receive Australian dollars/ Pay U.S. dollars	—	—	2,017,838	—	—	—	2,017,838	(82,070)
Exchange rate forward								
Receive euros/Pay U.S. dollars	—	—	—	—	—	—	—	—

N.A. = not applicable.

Numbers may not total due to rounding.

(1) The information in this table has been calculated using the exchange rate at December 31, 2014 of: Ps. 14.7180 = U.S. \$1.00 and Ps. 17.8103 = 1.00 euro.

(2) PEMEX's management uses these DFIs to hedge market risk; however, these DFIs do not qualify for accounting purposes as hedges and are recorded in the financial statements as entered into for trading purposes.

(3) Positive numbers represent a favorable fair value to PEMEX.

(4) PMT's risk management policies and procedures establish that DFIs should be used only for hedging purposes; however DFIs are not recorded as hedges for accounting purposes.

Source: PEMEX

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**B. Fair value of derivative financial instruments**

PEMEX monitors the fair value of its DFI portfolio on a periodic basis. The fair value represents the price at which one party would assume the rights and obligations of the other, and is calculated for DFIs through models commonly used in the international financial markets, based on inputs obtained from major market information systems and price providers.

PEMEX's DFI portfolio is composed primarily of swaps, the prices of which can be estimated by discounting flows using the appropriate factors, and contains no exotic instruments that require numerical approximations for their valuation.

Embedded derivatives

In accordance with established policies, PEMEX has analyzed the different contracts it has entered into and has determined that according to the terms thereof, none meet the criteria necessary to be classified as embedded derivatives. Accordingly, as of December 31, 2015 and 2014, PEMEX did not recognize any embedded derivatives (foreign currency or index).

Accounting treatment

PEMEX enters into derivatives transactions with the sole purpose of hedging financial risks related to its operations, firm commitments, planned transactions and assets and liabilities recorded on its statement of financial position. Nonetheless, some of these transactions do not qualify for hedge accounting treatment because they do not meet the requirements of IAS 39, "Financial Instruments Recognition and Measurement" ("IAS 39") for designation as hedges. They are therefore recorded in the financial statements as non-hedge instruments or as instruments entered into for trading purposes, despite the fact that their cash flows are offset by the cash flows of the positions to which they relate. As a result, the changes in their fair value are recognized in the "Derivative financial instruments (cost) income, net" line item in the consolidated statement of comprehensive income.

As of December 31, 2015 and 2014, the net fair value of PEMEX's DFIs was Ps. (25,699,581) and Ps. (15,897,184), respectively. As of December 31, 2015 and 2014, PEMEX did not have any DFIs designated as hedges.

The following table shows the fair values and notional amounts of PEMEX's over-the-counter ("OTC") DFIs that were designated as non-hedges for accounting purposes and entered into for trading purposes as of December 31, 2015 and 2014. It should be noted that:

- DFI's fair value includes the CVA and is calculated based on market quotes obtained from market sources such as Reuters and Bloomberg. Forward curves for natural gas are supplied by the KiodeX Risk Workbench platform.
- Fair value is calculated internally, by discounting cash flows with the corresponding zero-coupon yield curve, in the original currency.
- The information is presented in thousands of pesos (except as noted).

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DFI	Position	December 31, 2015		December 31, 2014	
		Notional amount	Fair Value	Notional Amount	Fair value
Interest rate swaps	PEMEX pays fixed in U.S. dollar and receives floating in 3-month U.S. dollar LIBOR + spread.	18,819,609	(245,232)	17,569,613	(180,074)
Interest rate swaps	PEMEX pays fixed in U.S. dollar and receives floating in 6-month U.S. dollar LIBOR + spread.	16,776,338	127,586	N.A.	N.A.
Cross-currency swaps	PEMEX pays fixed in pesos and receives notional in UDI.	16,105,371	(207,713)	16,105,371	(52,769)
Cross-currency swaps	PEMEX pays the 28-day TIIE + spread in pesos and receives fixed in UDI.	19,776,317	501,968	10,069,385	1,055,122
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in Japanese yen.	5,483,580	(475,356)	5,902,248	(630,769)
Cross-currency swaps	PEMEX pays floating in 6-month U.S. dollar LIBOR + spread and receives floating in 6-month yen LIBOR + spread.	14,736,383	(4,943,807)	12,605,125	(4,433,763)
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in euro.	162,738,612	(19,088,133)	108,191,665	(11,254,375)
Cross-currency swaps	PEMEX pays floating in 6-month U.S. dollar LIBOR + spread and receives fixed in Pound sterling.	10,951,197	(693,597)	9,367,374	61,391
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in CHF.	15,696,040	(281,999)	4,835,719	(306,266)
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in AUD.	2,047,918	(46,526)	2,017,838	(82,070)
Propane gas swaps	PEMEX receives floating.	1,702,618	(276,553)	N.A.	N.A.
Natural gas swaps	PEMEX receives fixed.	(240,934)	37,675	(182,948)	40,450
Natural gas swaps	PEMEX receives floating.	236,960	(32,990)	179,087	(36,852)
Natural gas options	PEMEX Long Call.	269,091	5,426	170,182	1,843
Natural gas options	PEMEX Short Call.	(269,091)	(5,310)	(170,182)	(1,823)
Interest rate swaps	PEMEX pays fixed in U.S. dollar and receives floating in U.S. dollar LIBOR 1M.	1,729,833	(75,019)	1,693,433	(77,229)
<b>Subtotal</b>			<b>Ps.(25,699,580)</b>		<b>Ps.(15,897,184)</b>

DFI	Market	December 31, 2015		December 31, 2014	
		Volume (MMb)	Fair value	Volume (MMb)	Fair value
Futures	Exchange traded	0.4	(7,994)	(1.7)	118,140
Petroleum Products Swaps	Exchange traded	11.6	550,952	(6.88)	(1,831,963)

Notes: Numbers may not total due to rounding.

(1) The fair value of the Futures and the Petroleum Products Swaps, was recognized as "Cash and cash equivalents" in the statement of financial position because PEMEX considered these financial assets to be fully liquid.



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The exchange rate for U.S. dollars as of December 31, 2015 and 2014 was Ps. 17.2065 and Ps. 14.7180 per U.S. dollar, respectively. The exchange rate for euros as of December 31, 2015 and 2014 was Ps. 18.80843 and Ps. 17.8103 per euro, respectively.

For the years ended December 31, 2015, 2014 and 2013, PEMEX recognized a net gain (loss) of Ps. (21,449,877), Ps. (9,438,570) and Ps. 1,310,973, respectively, in the "Derivative financial instruments (cost) income, net" line item with respect to DFIs treated as instruments entered into for trading purposes.

The following table presents the location on the statement of financial position and the fair value of PEMEX's DFIs (including both DFIs that have not reached maturity and those that have reached maturity but have not been settled), as of December 31, 2015 and 2014:

		<b>Derivatives assets</b>	
		<b>Fair value</b>	
		<b>December 31,</b>	
	<b>Location in statement of financial position</b>	<b>2015</b>	<b>2014</b>
<b>Derivatives not designated as hedging instruments</b>			
Embedded derivatives	Derivative financial instruments	Ps. —	Ps. —
Forwards	Derivative financial instruments	—	—
Futures	Derivative financial instruments	—	—
Stock options	Derivative financial instruments	—	—
Natural gas options	Derivative financial instruments	5,432	1,845
Equity swaps	Derivative financial instruments	—	—
Cross-currency swaps	Derivative financial instruments	1,426,626	1,520,167
Natural gas swaps	Derivative financial instruments	41,462	40,544
Petroleum product swaps	Derivative financial instruments	—	—
Propane swaps	Derivative financial instruments	—	—
Interest rate swaps	Derivative financial instruments	127,586	—
Others	Derivative financial instruments	—	—
<b>Total derivatives not designated as hedging instruments</b>		<b>1,601,106</b>	<b>1,562,556</b>
<b>Total assets</b>		<b>Ps. 1,601,106</b>	<b>Ps. 1,562,556</b>
		<b>Derivatives liabilities</b>	
		<b>Fair value</b>	
		<b>December 31,</b>	
	<b>Location in statement of financial position</b>	<b>2015</b>	<b>2014</b>
<b>Derivatives not designated as hedging instruments</b>			
Embedded derivatives	Derivative financial instruments	Ps. —	Ps. —
Forwards	Derivative financial instruments	—	—
Futures	Derivative financial instruments	—	—
Stock options	Derivative financial instruments	—	—
Natural gas options	Derivative financial instruments	(5,316)	(1,825)
Equity swaps	Derivative financial instruments	—	—
Cross-currency swaps	Derivative financial instruments	(26,661,789)	(17,163,666)
Natural gas swaps	Derivative financial instruments	(36,777)	(36,946)
Petroleum product swaps	Derivative financial instruments	—	—
Propane swaps	Derivative financial instruments	(276,553)	—
Interest rate swaps	Derivative financial instruments	(320,252)	(257,303)
Others	Derivative financial instruments	—	—
<b>Total derivatives not designated as hedging instruments</b>		<b>(27,300,687)</b>	<b>(17,459,740)</b>
<b>Total liabilities</b>		<b>Ps.(27,300,687)</b>	<b>Ps.(17,459,740)</b>
<b>Net total</b>		<b>Ps.(25,699,581)</b>	<b>Ps.(15,897,184)</b>

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The following tables presents the gain (loss) recognized in income on PEMEX's DFIs for the years ended December 31, 2015, 2014 and 2013, and the line location in the financial statements of such gains and losses.

Derivatives not designated as hedging instruments	Location of gain (loss) recognized in statement of operations on derivatives	Amount of gain (loss) recognized in statement of operations on derivatives	
		December 31,	
		2015	2014
Embedded derivatives	Derivative financial instruments (cost) income, net	Ps. —	Ps. —
Forwards	Derivative financial instruments (cost) income, net	—	(146,415)
Futures	Derivative financial instruments (cost) income, net	1,387,177	4,696,862
Stock options	Derivative financial instruments (cost) income, net	—	(93,715)
Natural gas options	Derivative financial instruments (cost) income, net	4,786	4,535
Equity swaps	Derivative financial instruments (cost) income, net	—	2,402,992
Cross-currency swaps	Derivative financial instruments (cost) income, net	(21,358,898)	(15,815,498)
Natural gas swaps	Derivative financial instruments (cost) income, net	4,355	4,977
Petroleum product swaps	Derivative financial instruments (cost) income, net	—	—
Propane swaps	Derivative financial instruments (cost) income, net	(1,136,188)	—
Interest rate swaps	Derivative financial instruments (cost) income, net	(351,109)	(492,308)
Others	Derivative financial instruments (cost) income, net	—	—
Total		<u>Ps. (21,449,877)</u>	<u>Ps. (9,438,570)</u>

		2013
Embedded derivatives	Derivative financial instruments (cost) income, net	Ps. —
Forwards	Derivative financial instruments (cost) income, net	186,857
Futures	Derivative financial instruments (cost) income, net	(129,329)
Stock options	Derivative financial instruments (cost) income, net	(1,241,765)
Natural gas options	Derivative financial instruments (cost) income, net	3,587
Equity swaps	Derivative financial instruments (cost) income, net	4,726,258
Cross-currency swaps	Derivative financial instruments (cost) income, net	(2,166,762)
Natural gas swaps	Derivative financial instruments (cost) income, net	8,931
Petroleum product swaps	Derivative financial instruments (cost) income, net	(89,020)
Propane swaps	Derivative financial instruments (cost) income, net	20
Interest rate swaps	Derivative financial instruments (cost) income, net	58,744
Others	Derivative financial instruments (cost) income, net	(46,548)
Total		<u>Ps. 1,310,973</u>

**C. Fair value hierarchy**

PEMEX values its DFIs under standard methodologies commonly applied in the financial markets. PEMEX's related assumptions therefore fall under Level 2 of the fair value hierarchy for market participant assumptions, as described below.

The fair values determined by Level 1 inputs utilize quoted prices in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs are based on quoted prices for similar assets or liabilities in active markets, and inputs other than quoted prices that are observed for assets or liabilities. Level 3 inputs are unobservable inputs for the assets or liabilities, and include situations where there is little, if any, market activity for the assets or liabilities. Management uses appropriate valuation techniques based on the available inputs to measure the fair values of PEMEX's applicable assets and liabilities.

When available, PEMEX measures fair value using Level 1 inputs, because they generally provide the most reliable evidence of fair value.

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PEMEX periodically evaluates its exposure to international hydrocarbon prices, interest rates and foreign currencies and uses derivative instruments as a mitigation mechanism when potential sources of market risk are identified.

The following tables present information about PEMEX's assets and liabilities measured at fair value, and indicate the fair value hierarchy of the inputs utilized to determine the fair values as of December 31, 2015 and 2014.

	Fair value hierarchy			Total as of December 31 2015
	Level 1	Level 2	Level 3	
<b>Assets:</b>				
Derivative financial instruments	Ps. —	Ps. 1,601,106	Ps. —	Ps. 1,601,106
Available-for-sale financial assets	3,944,696	—	—	3,944,696
<b>Liabilities:</b>				
Derivative financial instruments	—	(27,300,687)	—	(27,300,687)
				<b>Total as of December 31 2014</b>
<b>Assets:</b>				
Derivative financial instruments	Ps. —	Ps. 1,562,556	Ps. —	Ps. 1,562,556
Available-for-sale financial assets	5,414,574	—	—	5,414,574
<b>Liabilities:</b>				
Derivative financial instruments	—	(17,459,740)	—	(17,459,740)

Where directly comparable market quotes are not available to measure the fair value of PEMEX's financial instruments, PEMEX uses Level 2 valuation to calculate fair value based on quotes from major market sources. These market quotes are then adjusted internally using standard market pricing models for interest rate, currency, equity and commodities derivatives.

The estimated fair value of the remaining financial assets and liabilities, as of December 31, 2015 and 2014 in nominal terms, was as follows:

	December 31, 2015		December 31, 2014	
	Carring value	Fair value	Carring value	Fair value
<b>Assets:</b>				
Cash and cash equivalents	Ps. 109,368,880	Ps. 109,368,880	Ps. 117,988,528	Ps. 117,988,528
Accounts receivable and other	79,245,821	79,245,821	114,422,967	114,422,967
Other assets	57,407,660	57,407,660	7,654,360	7,654,360
<b>Liabilities:</b>				
Suppliers	167,314,243	167,314,243	116,178,295	116,178,295
Accounts and accrued expenses payable	13,237,407	13,237,407	12,235,005	12,235,005
Short-term debt and current portion of long-term debt	192,508,668	192,508,668	145,866,217	145,866,217
Long-term debt	1,300,873,167	1,265,519,157	997,384,286	1,072,299,323

The fair values of the financial current assets and current liabilities presented in the table above are included for informational purposes.

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The fair values of current financial assets and short-term liabilities are equal to their nominal values because, due to their short-term maturities, their nominal values are very close to their corresponding fair values.

The fair value of long-term debt is estimated using quotes from major market sources which are then adjusted internally using standard market pricing models. As a result of relevant assumptions, estimated fair values do not necessarily represent the actual terms at which existing transactions could be liquidated or unwound.

The information related to “Cash and cash equivalents”, “Accounts receivable and other”, “Available-for-sale financial assets”, “Permanent investments in associates”, “Other assets” and “Debt” is described in the following notes, respectively:

- Note 6, Cash, Cash Equivalents and Restricted Cash;
- Note 7, Accounts Receivable, net;
- Note 10, Available-for-Sale Financial Assets;
- Note 11, Permanent Investments in Associates;
- Note 14, Other Assets; and
- Note 15, Debt.

**NOTE 17. EMPLOYEE BENEFITS**

Until December 31, 2015, PEMEX only had defined benefit pension plans for the retirement of its employees, to which only PEMEX contributes. Benefits under these plans are based on an employee’s salary and years of service completed at retirement. As of January 1, 2016, PEMEX also has a defined contribution pension plan, in which both PEMEX and the employee contribute to an employee’s individual account.

Obligations and costs of the defined benefit pension plans are recorded in accordance with actuarial valuations performed by independent actuaries. The regulatory framework of the defined benefit pension plan assets does not establish minimum funding requirements. PEMEX has also established plans for other post-employment benefit obligations whose actuarial amounts are determined by independent experts. Such plans include disability and death and survivor benefits.

As of December 31, 2015, PEMEX funded its employees benefits through Mexican trusts, the resources of which come from the retirement line item of PEMEX’s annual budget (an operating expense), or any other line item that substitutes or relates to this line item, or that is associated to the same line item and the interests, dividends or capital gains obtained from the investments of the trusts.

During 2015, PEMEX implemented the following changes to its pension plans: (i) increasing the retirement requirements for union employees with less than 15 years of service and hired until December 31, 2015 and for non-union employees with less than 25 years of service and under 55 years old and (ii) a system of individual accounts for those workers hired beginning January 2016, to which the employee and PEMEX will contribute under the defined contribution pension plan, was created.

As a result of those changes to the pension plans, PEMEX obtained a reduction in defined benefit obligations (DBO) of Ps. 198,951,179.

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The following table show the amounts associated with PEMEX's labor obligations:

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
Liability for defined benefits at retirement and post-employment at the end of the year	Ps. 1,258,480,019	Ps. 1,455,240,835
Liability for other long-term benefits	20,905,422	18,847,693
Total liability for defined benefits recognized in the consolidated statement of financial position at the end of the year	<u>Ps. 1,279,385,441</u>	<u>Ps. 1,474,088,528</u>

The following tables contain detailed information regarding PEMEX's retirement and post-employment benefits:

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
<b>Changes in the Liability for Defined Benefits</b>		
Liability for defined benefits at the beginning of year	Ps. 1,455,240,835	Ps. 1,106,039,249
Recognition of the modifications in plan pensions	(198,951,179)	—
Current Service cost	34,680,772	24,928,657
Net interest	99,671,447	91,115,596
Defined benefits paid by the fund	(4,291,090)	(4,706,804)
Actuarial (gains) losses in other comprehensive results due to:		
Change in financial assumptions	(54,415,586)	264,534,833
Change in demographic assumptions	(46,507,299)	25,038,336
For experience during the year	21,875,522	(13,347,012)
In plan assets during the year	366,511	(321,499)
Contributions paid to the fund	(49,189,914)	(38,040,521)
<b>Defined benefit liabilities at end of year</b>	<u>Ps. 1,258,480,019</u>	<u>Ps. 1,455,240,835</u>

In 2015, 2014 and 2013, the net actuarial gains of Ps. (78,680,852), losses of Ps. 275,904,658 and gains of Ps. (247,535,549), respectively, related to retirement and post-employment benefits, not including the normal year-to-year increase in obligations based on changes in population, age, seniority, wages, pensions and benefits, are due to the following modifications to the actuarial assumptions:

- i. **Increase in the discount and expected return on plan assets rates, was from 6.98% in 2014 to 7.41% in 2015.**

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
<b>Changes in Pension plan assets</b>		
Plan assets at the beginning of year	Ps. 2,993,244	Ps. 4,318,429
Expected return on plan assets	340,335	289,053
Payments by the pension fund	(46,843,824)	(39,976,258)
Company contributions to the fund	49,189,912	38,040,521
Actuarial (gains) losses in plan assets	(450,758)	321,499
<b>Pension plan assets at the end of the year</b>	<u>Ps. 5,228,909</u>	<u>Ps. 2,993,244</u>

PEMEX's plan assets are held in two trusts, the FOLAPE and the FICOLAVI, which are managed by BBVA Bancomer, S. A. and a technical committee for each trust that is comprised of personnel from Petróleos Mexicanos and the trusts.

The expected contribution to the fund for next year amounts to Ps. 47,247,000.

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As of December 31, 2015 and 2014, the amounts and types of plan assets are as follows:

	December 31,	
	2015	2014
Cash and cash equivalents	Ps. 343,488	Ps. 812,449
Available-for-sale financial assets	4,061,655	1,437,384
Debt instruments	823,766	743,411
<b>Total plan assets</b>	<b>Ps. 5,228,909</b>	<b>Ps. 2,993,244</b>

	December 31,	
	2015	2014
<b>Changes in Defined Benefit Obligations (DBO)</b>		
Defined benefit obligations at the beginning of year	Ps. 1,458,234,079	Ps. 1,110,357,679
Service costs	34,693,923	24,928,657
Financing costs	100,049,689	91,404,649
Past service costs	(66,160)	(21,867)
Payments by the fund	(51,134,915)	(44,661,195)
Amount of (gains) and losses recognized through other comprehensive income:	(79,116,509)	276,226,156
Modifications to the plan	(198,951,179)	—
<b>Defined benefit obligations at the end of year</b>	<b>Ps. 1,263,708,928</b>	<b>Ps. 1,458,234,079</b>

The asset ceiling test was not applied because there was a deficit of labor liabilities at the beginning and end of the year.

The effect of an increase or decrease of one percentage point in the assumed variation rate is a 17.11% decrease or a 13.39% increase in defined benefit obligations, respectively.

The effect of an increase or decrease of one percentage point in the assumed variation rate with respect to the cost and obligations related to medical services point is a 24.40% increase or a 18.42% decrease in defined benefit obligations, respectively.

Assumptions regarding future mortality are based on EMSSA2009 to Unique Circular of the *Comisión Nacional de Seguros y Fianzas* (National Commission of Insurance and Bonds) and include changes to the mortality rate established in 2014.

The following tables present additional fair value disclosure about plan assets and indicate their rank, in accordance with IFRS 13, as of December 31, 2015 and 2014:

Fair value measurements as of December 31, 2015				
Plan Assets	Quoted prices in active markets for identical assets (level 1)	Significant observable inputs (level 2)	Significant unobservable inputs (level 3)	Total
Asset category:				
Cash and cash equivalents	Ps. 343,488	Ps. —	Ps. —	Ps. 343,488
Available-for-sale financial assets	4,061,655	—	—	4,061,655
Debt instruments	823,766	—	—	823,766
<b>Total</b>	<b>Ps. 5,228,909</b>	<b>Ps. —</b>	<b>Ps. —</b>	<b>Ps. 5,228,909</b>

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<b>Plan Assets</b>	<b>Fair value measurements as of December 31, 2014</b>			
Asset category:				
Cash and cash equivalents	Ps. 812,449	Ps. —	Ps. —	Ps. 812,449
Available—for—sale financial assets	1,437,384	—	—	1,437,384
Debt instruments	743,411	—	—	743,411
<b>Total</b>	<u>Ps. 2,993,244</u>	<u>Ps. —</u>	<u>Ps. —</u>	<u>Ps. 2,993,244</u>

As of December 31, 2015 and 2014, the principal actuarial assumptions used in determining the defined benefit obligation for the plans are as follows:

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
Rate of increase in salaries	5.00%	5.00%
Rate of increase in pensions	3.75%	4.50%
Rate of increase in medical services	7.65%	7.65%
Inflation assumption	3.75%	4.00%
Discount and expected return on plan assets rate	7.41%	6.98%

In accordance with IAS 19, the discount rate used is determined by considering the government zero coupon curve generated from the fixed rate bonds Federal Government ("Bonds M") and Cetes, as well as the flow of payments expected to cover contingent liabilities.

*Other long-term benefits*

PEMEX has established other long-term benefit plans for its employees, to which employees do not contribute, which correspond to the same seniority premiums payable for disability, death and survivors benefits (payable to the widow and beneficiaries of worker), medical service, gas and basic basket for beneficiaries. Benefits under these plans are based on an employee's salary and years of service completed at separation. Obligations and costs of such plans are recorded in accordance with actuarial valuations performed by independent actuaries.

During 2015, PEMEX implemented the following changes to its pension plans: (i) increasing the retirement requirements for union employees with less than 15 years of service and hired until December 31, 2015 and for non-union employees with less than 25 years of service and under 55 years old and (ii) a system of individual accounts for those workers hired beginning January 2016, to which the employee and PEMEX will contribute under the defined contribution pension plan, was created.

As a result of those changes to the pension plan, PEMEX obtained a reduction in defined benefit long term obligations (OBD) of Ps. 2,913,135.

The amounts recognized for long term obligations in the statements of comprehensive income for the years ended December 31, 2015 and 2014 are as follows:

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
<b>Changes in the Liability for Defined Benefits</b>		
Liabilities defined benefit at the beginning of year	Ps. 18,847,693	Ps. 13,168,621
Charge to income for the year	5,818,221	2,195,031
Actuarial (gains) losses recognized in income due to:		
Change in financial assumptions	(1,746,245)	4,927,046
Change in demographic assumptions	(40,831)	494,054
For experience during the year	(1,973,416)	(1,937,059)
<b>Liabilities defined benefit at the end of year</b>	<u>Ps. 20,905,422</u>	<u>Ps. 18,847,693</u>

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The principal actuarial assumptions used in determining the defined benefit obligation for the plans are as follows:

	<b>December 31</b>	
	<b>2015</b>	<b>2014</b>
Rate of increase in salaries	5.00%	5.00%
Inflation assumption	3.75%	4.00%
Discount and expected return on plan assets rate	7.41%	6.98%

In accordance with IAS 19, the discount rate used is determined by considering the government zero coupon curve generated from the fixed rate bonds Federal Government ("Bonds M") and Cetes, as well as the flow of payments expected to cover contingent liabilities.

**NOTE 18. PROVISIONS FOR SUNDRY CREDITORS**

At December 31, 2015 and 2014, the provisions for sundry creditors and others is as follows:

	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
Provision for plugging of wells (Note 12)	Ps. 56,894,695	Ps. 52,460,749
Provision for trails in process (Note 25)	12,775,263	19,787,440
Provision for environmental costs (Note 25)	3,521,838	6,174,754
	<u>Ps. 73,191,796</u>	<u>Ps. 78,422,943</u>

The following tables show the allowance account for plugging of wells, trials in progress and environmental costs:

	<b>Plugging of wells</b>	
	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
Balance at the beginning of the year	Ps. 52,460,749	Ps. 46,118,080
Additions capitalized in fixed assets	5,067,782	(2,698,564)
Discount rate against income	(608,160)	9,169,327
Deductions	(25,676)	(128,094)
<b>Balance at the end of the year</b>	<u>Ps. 56,894,695</u>	<u>Ps. 52,460,749</u>

	<b>Trials in progress</b>	
	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
Balance at the beginning of the year	Ps. 19,787,440	Ps. 17,624,737
Additions against income	2,013,242	3,374,049
Discount rate against income	(2,608,494)	(1,145,623)
Deductions <sup>1</sup>	(6,416,925)	(65,723)
<b>Balance at the end of the year</b>	<u>Ps. 12,775,263</u>	<u>Ps. 19,787,440</u>



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	<b>Environmental costs</b>	
	<b>December 31,</b>	
	<b>2015</b>	<b>2014</b>
Balance at the beginning of the year	Ps. 6,174,754	Ps. 5,466,581
Additions against income	1,087,867	2,618,389
Discount rate against income	(3,622,807)	(1,054,310)
Deductions	(117,976)	(855,906)
<b>Balance at the end of the year</b>	<b>Ps. 3,521,838</b>	<b>Ps. 6,174,754</b>

1 Includes deductions resulting from the agreement between PEMEX and Conproca achieved during the third quarter of 2015.

*Provision for plugging of wells*

PEMEX records a provision at present value for the future plugging cost of an oil production facility or pipeline at the time that it is built.

The plugging provision represents the present value of plugging costs related to oil and gas properties. These provisions have been created based on internal estimates of PEMEX. PEMEX has made certain assumptions based on the current economic environment that PEMEX believes provide a reasonable basis on which to estimate the future liability. These estimates are reviewed regularly to take into account any material changes in the assumptions. However, actual plugging costs in the long run will depend on future market prices for the necessary plugging work, which reflect market conditions at the time the work is being performed.

Moreover, the time of plugging depends on when the fields cease to have economically viable production rates, which, in turn, depends on the inherently uncertain future prices of oil and gas.

**NOTE 19. DISCLOSURES OF CASH FLOW**

The following items represent non-cash transactions and are presented for disclosure purposes:

	<b>For the years ended December 31,</b>		
	<b>2015</b>	<b>2014</b>	<b>2013</b>
<b>Investing activities</b>			
Available-for-sale financial assets	Ps. (3,206,316)	Ps. (765,412)	Ps. 4,453,495
<b>Financing activities</b>			
Employee benefits equity effect <sup>(i)</sup>	78,556,569	(275,962,370)	247,376,029
Net (benefits) cost of the year for employee benefits <sup>(i)</sup>	(62,549,142)	121,723,328	115,339,689
Financed Public Works Contracts	2,001,093	3,207,947	3,042,876
Currency translation effect	13,262,101	11,379,657	2,240,643
Accrued interest	4,816,784	3,856,736	817,261

(i) Items that do not impact cash flows but that reflect the actuarial valuation at the end of the year.

**NOTE 20. INCOME TAXES AND FEDERAL DUTIES**

The *Ley de Ingresos sobre Hidrocarburos* (Hydrocarbons Revenue Law) and the Federal Revenue Law for fiscal year 2015 comprise the fiscal regime applicable to PEMEX for fiscal year 2015. The Hydrocarbons Revenue law and the Federal Revenue Law were published in the Official Gazette of the Federation on August 11, 2014 and November 13, 2014, respectively, and came into effect, in each case, on January 1, 2015.

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Under the fiscal regime applicable to PEMEX for fiscal year 2015, the following nine duties are no longer applicable to PEMEX: (i) the DOSH, (ii) the Duty for Scientific and Technological Research on Energy, (iii) the Duty for Oil Monitoring, (iv) the Hydrocarbons Duty for the Stabilization Fund, (v) the Extraordinary Duty on Crude Oil Exports, (vi) the Extraction of Hydrocarbons Duty, (vii) the Special Hydrocarbons Duty, (viii) the Additional Duty on Hydrocarbons and (ix) the Duty to Regulate and Supervise the Exploration and Exploitation of Hydrocarbons.

The fiscal regime applicable to the exploration and production assignments granted to PEMEX by the Mexican Government contemplates the following taxes and duties:

**a. *Derecho por la Utilidad Compartida (Profit-sharing Duty).***

As of January 1, 2015, the applicable rate of this duty was 70%. The computation of this duty was based on the value of hydrocarbons produced in the relevant area, minus certain permitted deductions. Pursuant to the Hydrocarbons Revenue Law, this duty decreases on an annual basis. As of January 1, 2019, this duty will be set at 65%.

During 2015, Pemex Exploration and Production's contribution under this duty totaled Ps. 375,990,409 as of December 31, 2015 credited towards the following payments: Ps. 266,136,000 in monthly advance payments, Ps. 85,234,004 in monthly provisional payments and Ps. 24,620,405 remains pending.

Because the Hydrocarbon Exploration Duty was not deducted from the annual payment of profit-sharing duty to be made on March 31, 2016, PEMEX estimated that this duty increased by Ps. 692,296. As a result, PEMEX recorded in the financial statements as of December 31, 2015 a total amount for this duty of Ps. 376,682,704.

**b. *Derecho de Extracción de Hidrocarburos (Hydrocarbons Extraction Duty).***

This duty is to be calculated based on a rate that varies according to (i) the type of hydrocarbon (e.g., crude oil, associated natural gas, non-associated natural gas or condensates), (ii) the volume of production and (iii) the relevant market price.

During 2015 Pemex Exploration and Production made payments of Ps. 48,857,639 under this duty, generating a positive balance of Ps. 152,317. As of December 31, 2015 this positive balance has not yet been credited.

**c. *Derecho de Exploración de Hidrocarburos (Exploration Hydrocarbons Duty).***

The Mexican Government is entitled to collect a monthly payment of Ps. 1,150 per square kilometer of non-producing areas. After 60 months, this tax increases to Ps. 2,750 per square kilometer for each additional month that the area is not producing. These amounts will be updated on an annual basis in accordance with the national consumer price index.

Pemex Exploration and Production is obliged to monthly payment of this duty which will be calculated by applying a quote per square kilometer on the assigned phase of production and extraction phase.

As of January 1, 2015 during the exploration phase, the quote was Ps. 1,500 while during the extraction phase the quote was Ps. 6,000. The tax rate will be updated each year in January.

During 2015, Pemex Exploration and Production made payments under this duty, totaling Ps. 988,992.

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In 2014, the fiscal regime for Pemex-Exploration and Production was governed by the *Ley Federal de Derechos* (Federal Duties Law), which contemplated the following duties:

**a. DOSH**

During 2014, the applicable rate of this duty was 71.5%. The computation of this duty was based on the value of the extracted total production of crude oil and natural gas during the year, minus certain permitted deductions established in the Federal Duties Law (including certain investments, costs, expenses and duties).

During 2014, Pemex-Exploration and Production made payments which were credited towards the annual payment of the DOSH in the amount of Ps. 643,383,550, and a pending payment of Ps. 11,356,201.

**b. Hydrocarbons Duty for the Stabilization Fund**

Pemex-Exploration and Production was subject to the payment of this duty when, during the applicable year, the weighted average Mexican crude oil export price exceeded U.S. \$22.00. The applicable rate varied between 1% and 10%, depending on the weighted average price of crude oil exports, with the maximum rate of 10% applying when the price exceeded U.S. \$31.00 per barrel. Collections of this duty are deposited in the *Fondo de Estabilización de Ingresos Petroleros* (Oil Revenues Stabilization Fund).

**c. Derecho Extraordinario Sobre la Exportación de Petróleo Crudo (Extraordinary Duty on Crude Oil Exports)**

This duty was calculated by applying a rate of 13.1% to the value resulting from multiplication of (i) the difference between the annual weighted average Mexican crude oil export price and the budgeted crude oil price as provided for in the Federal Revenue Law (U.S. \$85.00 during 2014), by (ii) the annual export volume. The duty actually paid could be credited against the Hydrocarbons Duty for the Stabilization Fund. Collections of this duty were directed to the Federative Entities through the Stabilization Fund for the Income of Federative Entities.

**d. Derecho para la Investigación Científica y Tecnológica en Materia de Energía (Duty for Scientific and Technological Research on Energy)**

During 2014, this duty was applied at a rate of 0.65% to the value of the extracted production of crude oil and natural gas for the year. The proceeds of this tax were allocated to the following funds:

1. *Fondo Sectorial CONACYT* (CONACYT Sector Fund) of the *Consejo Nacional de Ciencia y Tecnología* (National Council of Science and Technology, or "CONACYT") of the Ministry of Energy.
2. *Fondo CONACYT* (CONACYT Fund) of the Ministry of Energy.
3. *Fondo de Investigación Científica y Desarrollo Tecnológico del Instituto Mexicano del Petróleo* (Scientific Research and Technological Development Fund of the Mexican Petroleum Institute).
4. CONACYT Sector Fund of the Ministry of Energy.

**e. Derecho para la Fiscalización Petrolera (Duty for Oil Monitoring)**

This duty was applied at a rate of 0.003% for 2014 to the value of extracted production of crude oil and natural gas for the year. The revenues from this tax are earmarked for the *Auditoría Superior de la Federación* (Supreme Federal Audit Office).

**f. Extraction of Hydrocarbons Duty**

During 2014, this duty was applied at a 15% rate to the value of the crude oil and natural gas extracted from the following fields:

- i. Fields in the Paleocanal de Chicontepec as a whole.

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- ii. Fields in the Paleocanal de Chicontepec that have been segregated under the Federal Duties Law.
- iii. The deep waters in the Gulf of Mexico (during 2014, no crude oil or natural gas was produced from such fields).
- iv. In 2014 the SHCP authorized the inclusion of an additional two fields to the marginal fields inventory, totaling 103 fields.

Collections of this duty were deposited in the Oil Revenues Stabilization Fund.

**g. *Special Hydrocarbons Duty***

During 2014, this duty was applied at a rate of 30% to the difference between the annual value of the crude oil and natural gas extracted from the fields covered in [Note 19(f)] above, and certain permitted deductions (including specific investments, certain expenses and costs, among others).

Production above a threshold of 240 million barrels of crude oil equivalent was taxed at a rate of 36% of the value that exceeded this threshold.

The permitted deductions for certain costs, expenses and investments could not exceed 60% of the value of the crude oil and natural gas extracted annually from these fields or U.S. \$32.50. This amount was updated annually using the U.S. producer price index. At December 31, 2014 the updated amount was U.S. \$36.86.

Fields referred to in this law were those set forth in Sections (i), (ii), (iii) and (iv) of subsection (j) of this Note.

**h. *Additional Duty on Hydrocarbons***

This duty was applied when the accumulated annual average value of barrels of oil equivalent extracted was greater than U.S. \$60.00. The accumulated annual average value of barrels of oil equivalent extracted in 2014 was U.S. \$68.04. The threshold price at which the duty takes effect was adjusted to take account of inflation, as measured by the change in the U.S. producer price index.

This duty was calculated by applying a rate of 52% to the value resulting from the multiplication of (i) the difference between the accumulated annual average value of barrels of oil equivalent extracted in the field in question and U.S. \$60.00, by (ii) the volume of oil equivalent extracted in the field in question for the year.

Fields referred to in this law were those set forth in Sections (i), (ii), (iii) and (iv) of subsection (j) of this Note.

**i. *Derecho para Regular y Supervisar la Exploración y Explotación de Hidrocarburos (Duty to Regulate and Supervise the Exploration and Exploitation of Hydrocarbons)***

This duty applied a fee of 0.03% on the annual value of crude oil and natural gas extracted during the year. The fee was assessed on an annual basis made in accordance with applicable rules. Collections of this duty were directed to the budget of the NHC.

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The fiscal regime applicable to PEMEX during 2015 contemplated the following indirect duties:

**a. IEPS Tax**

The IEPS Tax is an indirect tax on domestic sales of gasoline and diesel that Pemex-Refining collected on behalf of the Mexican Government. The IEPS Tax on the sale of gasoline and diesel was equivalent to the difference between the international reference price of each product (adjusted by freight costs and quality factors) and the retail price of the product (not including value added tax, the retailers' margin and freight costs). Thus, the Mexican Government ensured that PEMEX retained an amount reflecting the international prices (adjusted as described above) of these products, while the Mexican Government collected the difference between the international prices and the prices at which these products were sold in Mexico.

In the past, some IEPS Tax rates were negative as a result of the rules to calculate this tax rate. The Federal Revenue Law for each of the fiscal years of 2006 to 2014 provided that the IEPS Tax amounts resulting from applying negative rates could be credited against the IEPS Tax liability and, if in excess, could be credited against the value added tax. Any remaining amount could be credited against the Ordinary Hydrocarbons Duty. Negative IEPS taxes during 2014 were credited in accordance with such rules.

As of December 31, 2015, PEMEX remains subject to the IEPS Tax. However, the Federal Revenue Law applicable for the fiscal year beginning January 1, 2015 provides that negative IEPS Tax amounts may now only be credited against the IEPS Tax liability.

As a result of this credit, in 2015, 2014 and 2013, PEMEX recognized revenues of approximately Ps. 2,519,126, Ps. 43,108,707 and Ps. 94,466,039, respectively.

**b. Value Added Tax ("VAT")**

For VAT purposes, final monthly payments are determined based on PEMEX's cash flow, in accordance with the provisions of the Value Added Tax Law, which is applicable to payers of this tax.

**Income taxes are described below:**

**c. IRP**

Until December 31, 2014, this tax was applicable to Petróleos Mexicanos and the Subsidiary Entities other than Pemex-Exploration and Production, and was calculated by applying a 30% rate to the excess of total revenues minus authorized deductions, in accordance with the Federal Income Law.

For the years ended December 31, 2014 and 2013, PEMEX generated an IRP as follows:

	<b>December 31,</b>	
	<b>2014</b>	<b>2013</b>
Current IRP	Ps. 5,086,841	Ps. 4,705,201
Deferred IRP <sup>(1)</sup>	(23,822,142)	(917,658)
<b>Total IRP</b>	<u>Ps.(18,735,301)</u>	<u>Ps. 3,787,543</u>

(1) At December 31, 2014, as a result of the repeal of the IRP, Petróleos Mexicanos canceled the Ps. 23,822,142 effect of the deferred IRP for 2014 for accounting purposes and recognized deferred income taxes of Ps. 124,002 in the statement of comprehensive income for the year ended December 31, 2014.

The IRP was repealed effective as of January 1, 2015. Beginning in fiscal year 2015, Petróleos Mexicanos was subject to the Income Tax Law.

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The expense (benefit) attributable to the profit (loss) from continuing operations before IRP was different from what would result from applying the rate of 30% to profit, as a result of the items listed below:

	<b>December 31,</b>	
	<b>2014</b>	<b>2013</b>
Expected IRP expense (benefit)	Ps. (5,065,075)	Ps. 54,674,666
Increase (decrease) resulting from:		
Tax effect of inflation-net	4,182,641	2,736,501
Cancellation of deferred tax	(23,822,142)	—
Difference between accounting and tax depreciation	1,116,630	(1,360,929)
Non-taxable loss sharing in subsidiaries, associates and others	(3,129,801)	(52,276,542)
Non-deductible expenses	5,367,726	130,377
Other-net	2,614,720	(116,530)
<b>IRP expense</b>	<b>Ps.(18,735,301)</b>	<b>Ps. 3,787,543</b>

**d. Income Tax**

Until December 31, 2014, Petróleos Mexicanos was not subject to the *Ley del Impuesto Sobre la Renta* (Income Tax Law). On January 1, 2015, Petróleos Mexicanos became subject to the Income Tax Law for fiscal year 2015, following the repeal of the *Impuesto a los Rendimientos Petroleros* (Hydrocarbon Income Tax, or “IRP”). The Subsidiary Companies had been and remain subject to the *Impuesto Sobre la Renta* (Income Tax, or “ISR”).

Beginning January 1, 2015, Petróleos Mexicanos, the Subsidiary Entities and some of the Subsidiary companies are subject to the Income Tax.

For fiscal year 2015, Pemex Exploration and Production made payments in the amount of Ps. 5,232,000, which will be credited towards the annual payment of the Income Tax.

This tax was calculated by applying a rate of 30% to the excess of total revenues for the year, which can be decreased depending on tax losses from previous years, minus authorized deductions.

Accounting income differs from taxable income primarily due to the effects inflation and differences between depreciation and other non-deductible expenses.

For the years ended December 31, 2015, 2014 and 2013, the Subsidiary Companies incurred the following income tax expense (benefit):

	<b>For the years ended December 31,</b>		
	<b>2015</b>	<b>2014</b>	<b>2013</b>
Current income tax	Ps. 7,426,892	Ps. 4,673,476	Ps. 4,641,531
Deferred income tax	(53,014,159)	(775,506)	(889,301)
<b>Total <sup>(1)</sup></b>	<b>Ps.(45,587,267)</b>	<b>Ps. 3,897,970</b>	<b>Ps. 3,752,230</b>

(1) As a result of the repeal of the IRP, Petróleos Mexicanos recognized these amounts in the statement of comprehensive income for the year ended December 31, 2014.

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The principal factors generating the deferred income tax are the following:

	December 31,	
	2015	2014
Deferred income tax asset:		
Provisions	Ps. 25,414,822	Ps. 17,240,794
Employee benefits	247,834,882	125,443,124
Advance payments from clients	1,015,357	895,316
Losses from prior years	1,514	3,752,712
Non-recoverable accounts	104,346	215,618
Derivative financial instruments	22,506	—
Wells, pipelines, properties, plant and equipment	446,970,333	—
Tax loss carryforwards <sup>(1)</sup>	14,894,231	2,043,202
Total deferred income tax asset	736,257,991	149,590,766
Valuation reserve <sup>(2)</sup>	(681,357,607)	(145,448,148)
Net deferred income tax asset	54,900,384	4,142,618
Deferred income tax liability:		
Wells, pipelines, properties plant and equipment <sup>(3)</sup>	(1,909,529)	(2,233,275)
Other	(274,305)	(2,082,667)
Total deferred income tax liability	(2,183,834)	(4,315,942)
<b>Net long-term deferred income tax liability</b>	<b>Ps. 52,716,550</b>	<b>Ps. (173,324)</b>

(1) Tax loss carryforwards matures in 2025.

(2) Due to PEMEX's estimate that fiscal revenues will not be generated in future periods, a valuation reserve was recognized to account for deferred income tax.

(3) Petróleos Mexicanos and its Subsidiary Entities use the book value of their fixed assets at December 31, 2015 to determine the tax value of such assets at December 31, 2015, in accordance with Transitional Article 9 of the Regulations to the Petróleos Mexicanos Law. Accordingly, there are no temporary differences in the calculation of PEMEX's deferred income tax.

Expense (benefit) attributable to the profit (loss) from continuing operations before income taxes was different from what would result from applying the rate of 30% to profit, as a result of the items listed below:

	For the years ended December 31,		
	2015	2014	2013
Expected income tax expense	Ps. (3,089,241)	Ps. 272,457	Ps. 4,445,349
Increase (decrease) resulting from:			
Tax effect of inflation-net	(1,618,327)	4,020,358	(106,974)
Difference between accounting and tax depreciation	(107,231)	1,116,630	(34,860)
Non-deductible expenses	(1,921,515)	2,437,778	72,841
Others-net <sup>(1)</sup>	(38,850,953)	(3,949,253)	(624,126)
<b>Income tax expense</b>	<b>Ps. (45,587,267)</b>	<b>Ps. 3,897,970</b>	<b>Ps. 3,752,230</b>

(1) The deferred tax effect of gains and losses from PMI CIM's performance is presented in (loss) profit comprehensive income in the amount of Ps. (124,285), Ps. (51,720) and Ps. 159,518 in 2015, 2014 and 2013, respectively.

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*e. Profit-sharing Duty*

The principal factors generating the deferred profit-sharing duty are the following:

	<u>2015</u>
Deferred Profit-sharing duty asset:	
Provisions	Ps. 34,632,301
Total deferred Profit-sharing duty asset	<u>34,632,301</u>
Deferred Profit-sharing duty liability:	
Wells, pipelines, propertines, plant and equipment	(29,231,976)
Deferred Profit-sharing duty liability	<u>(29,231,976)</u>
Deferret asset net	5,400,325
Valuation reserve <sup>(1)</sup>	(5,400,325)
<b>Total deferred duty</b>	<u>Ps. —</u>

(1) PEMEX recognized a valuation reserve since it estimated that any allowed deductions will not materialize in future years.

The deficit before taxes and duties from continuing operations before profit-sharing duty was different from such deficit as a result of applying a rate of 65% to the tax base because of the following items:

	<u>2015</u>
Expected duty expense:	\$200,925,491
Increase (decrease) resulting from:	
Non-cumulative profit	483,449,494
Non-deductible expenses	(684,374,984)
Production value	483,916,169
Deductible duties	(34,200,348)
Deductions cap	(73,033,117)
Profit-sharing duty expense	<u>\$376,682,705</u>

**Taxation applicable to contracts are described below:**

The Hydrocarbons Revenue Law also establishes the following duties applicable to PEMEX in connection with assignments granted to it by the Mexican Government:

- ***Cuota Contractual para la Fase Exploratoria (Exploration Phase Contractual Fee)***

During the exploration phase of a project governed by a license, a production-sharing contract or a profit-sharing contract, the Mexican Government is entitled to collect a monthly payment of Ps. 1,150 per square kilometer of non-producing areas. After 60 months, this fee increases to Ps. 2,750 per square kilometer for each additional month that the area is not producing. The fee amount will be updated on an annual basis in accordance with the national consumer price index. PEMEX was not subject to this tax as of December 31, 2015.



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- ***Regalías (Royalties)***  
Royalty payments to the Mexican Government are determined based on the “contractual value” of the relevant hydrocarbons, which is based on a variety of factors, including the type of underlying hydrocarbons (e.g., crude oil, associated natural gas, non-associated natural gas or condensates), the volume of production and the market price. Royalties are payable in connection with licenses, production-sharing contracts and profit-sharing contracts. PEMEX was not subject to this tax as of December 31, 2015.
- ***Pago del Valor Contractual (Contractual Value Payment)***  
Licenses require a payment calculated as a percentage of the “contractual value” of the hydrocarbons produced, as determined by the SHCP on a contract-by-contract basis. PEMEX was not subject to this tax as of December 31, 2015.
- ***Porcentaje a la Utilidad Operativa (Operating Profit Payment)***  
Production-sharing contracts and profit-sharing contracts require a payment equivalent to a specified percentage of operating profits. In the case of production-sharing contracts, this payment is to be made in-kind through delivery of the hydrocarbons produced. In the case of profit-sharing contracts, this payment is to be made in cash. PEMEX was not subject to this tax as of December 31, 2015.
- ***Bono a la Firma (Signing Bonus)***  
Upon execution of a license, a signing bonus is to be paid to the Mexican Government in an amount specified by the SHCP in the relevant bidding terms and conditions or in the contracts resulting from a migration. PEMEX was not subject to this tax as of December 31, 2015.
- ***Impuesto por la actividad de Exploración y Extracción de Hidrocarburos (Hydrocarbons Exploration and Extraction Activities Tax)***  
Contracts for exploration and extraction and assignments granted by the Mexican Government will include a specified tax on the exploration and extraction activities carried out in the relevant area. A monthly tax of Ps. 1,500 per square kilometer is payable during the exploration phase until the extraction phase begins. During the extraction phase of a project, a monthly tax of Ps. 6,000 per square kilometer is payable until the relevant contract for exploration and extraction or assignment is terminated. As of December 31, 2015 PEMEX made payments of Ps. 4,083,132 under this tax.

**NOTE 21. EQUITY (DEFICIT), NET*****a. Certificates of Contribution “A”***

On December 26, 2014, and December 24, 2013, the Mexican Government made an equity contribution of Ps. 20,000,000 and Ps. 65,000,000, respectively, to Petróleos Mexicanos in the form of Certificates of Contribution “A.”

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On January 19, 2015, the Mexican Government made an equity contribution of Ps. 10,000,000 to Petróleos Mexicanos in accordance with the *Ley Federal del Presupuesto y Responsabilidad Hacendaria* (Federal Law of Budget and Fiscal Accountability).

On December 24, 2015, the SHCP published in the Official Gazette of the Federation the *Disposiciones de carácter general relativas a la asunción por parte del Gobierno Federal de obligaciones de pago de pensiones y jubilaciones a cargo de Petróleos Mexicanos y sus empresas productivas subsidiarias* (General provisions regarding the assumption by the Federal Government of the payment obligations related to pensions and retirement plans of Petróleos Mexicanos and its productive state-owned subsidiaries). These regulations state the terms, conditions, financing mechanisms and payment arrangements pursuant to which the SHCP is to assume a portion of the payment obligations related to PEMEX's pensions and retirement plans. An independent expert will review the calculation, the methodology used, the maturity profile and all of the information provided by us.

In accordance with these provisions and prior to the completion of the independent expert's review described above, on December 24, 2015, the Mexican Government issued, through the SHCP, a Ps. 50,000,000 promissory note due December 31, 2050 payable to Petróleos Mexicanos (see Note 14).

The capitalization agreement between PEMEX and the Mexican Government states that the Certificates of Contribution "A" constitute permanent capital.

PEMEX's permanent equity is as follows:

	<u>Amount</u>
Certificates of Contribution "A"	Ps. 10,222,463
Inflation restatement increase through December 31, 2007	<u>39,382,372</u>
Certificates of Contribution "A" as of December 31, 2012	49,604,835
Increase in Certificates of Contribution "A" during 2013	<u>65,000,000</u>
Certificates of Contribution "A" as of December 31, 2013	114,604,835
Increase in Certificates of Contribution "A" during 2014	20,000,000
Certificates of Contribution "A" as of December 31, 2014	<u>134,604,835</u>
Increase in Certificates of Contribution "A" during 2014	60,000,000
<b>Certificates of Contribution "A" as of December 31, 2015</b>	<u><b>Ps.194,604,835</b></u>

**b. Mexican Government contributions**

In 2013, the Mexican Government authorized a contribution of Ps. 2,000,000 to the Fondo de Estabilización de los Ingresos Petroleros (Oil Revenues Stabilization Fund, or "FEIPEMEX"). This amount was paid to FEIPEMEX on January 27, 2014.

On September 12, 2014, the Mexican Government withdrew Ps. 3,583,100 from FEIPEMEX.

On December 23, 2014, the Mexican Government withdrew Ps. 70,000,000 from PEMEX's equity. On December 19, 2014, the Board of Directors acknowledged the equity withdrawal made by the Mexican Government. This equity withdrawal was recognized as a decrease in the Mexican Government contributions to Petróleos Mexicanos line item in PEMEX's consolidated statements of changes in equity (deficit).

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**c. Legal reserve**

Under Mexican law, each of the Subsidiary Companies is required to allocate a certain percentage of its net income to a legal reserve fund until the fund reaches an amount equal to a certain percentage of each Subsidiary Company's capital stock.

**d. Accumulated deficit from prior years**

PEMEX has recorded negative earnings in the past several years. However, the *Ley de Concursos Mercantiles* (Commercial Bankruptcy Law of Mexico) is not applicable to Petróleos Mexicanos and the Subsidiary Entities. Furthermore, the financing agreements to which PEMEX is a party do not provide for financial covenants that would be breached or events of default that would be triggered as a consequence of negative equity (see Note 2-c). The Mexican Government has focused its recent efforts on consolidating PEMEX's institutional strategy, including the approval of amendments to the Mexican Constitution published as the Energy Reform Decree on December 20, 2013, which permit it greater autonomy in decision making and enhanced operational viability (see Note 1).

**e. Non-controlling interest**

Effective July 1, 2005, PEMEX entered into an option agreement with BNP Private Bank & Trust Cayman Limited; the option was not exercised and was terminated on July 20, 2015. On July 1, 2015, PEMEX also entered into a new option agreement with SML Trustees Limited to acquire 100% of the shares of Pemex Finance, Ltd, which allows PEMEX to have control over Pemex Finance Ltd, because of the potential voting rights. As of the date of these consolidated financial statements the option agreement has not been exercised. As a result, the financial results of Pemex Finance, Ltd. are included in these consolidated financial statements of PEMEX. Under IFRS, variations in income and equity from Pemex Finance, Ltd. are presented in the consolidated statements of changes in equity (deficit), net as "non-controlling interest," and as net income and comprehensive income for the year, attributable to non-controlling interest, in the consolidated statements of comprehensive income, due to the fact that PEMEX does not currently own any of the shares of Pemex Finance, Ltd.

Similarly, because PEMEX does not currently own all of the shares of PMI CIM and HJ BARRERAS, variations in income and equity from these entities are also presented in the consolidated statements of changes in equity (deficit) as "non-controlling interest."

As of December 31, 2015 and 2014, non-controlling interest represented gains of Ps. 253,278 and Ps. 344,818, respectively, in PEMEX's equity (deficit).

**NOTE 22. OTHER REVENUES AND EXPENSES-NET**

Other revenues and expenses—net for each of the years ended December 31, 2015, 2014 and 2013, was as follows:

	December 31		
	2015	2014	2013
Revenues:			
Income for services	Ps. 3,953,888	Ps. 1,607,273	Ps. 946,239
Provisions	3,657,465	969,850	792,780
Other	3,335,489	4,364,756	6,034,101
Negative IEPS (see Note 20)	2,519,126	43,108,707	94,466,039
Claims recovery	1,975,281	780,509	411,020
Bidding terms, sanctions, penalties and other	1,262,458	3,031,159	2,159,847
Franchise fees	1,148,527	1,055,753	999,491
Total other revenues	17,852,235	54,918,007	105,809,517
Expenses:			
Claims	(12,527,548)	(5,885,829)	(2,039,355)
Disposal assets cost	(3,364,063)	(1,778,641)	(5,826,680)
Services provided	(3,237,984)	(2,281,174)	(2,205,067)
Other	(922,272)	(3,054,848)	(4,871,521)
Other provisions	(173,634)	(4,365,119)	(731,209)
Total other expenses	(20,225,501)	(17,365,610)	(15,673,832)
<b>Other revenues and expenses-net</b>	<b>Ps. (2,373,266)</b>	<b>Ps. 37,552,397</b>	<b>Ps. 90,135,685</b>

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**NOTE 23. RELATED PARTIES**

Balances and transactions with related parties are mainly due to: (i) sale and purchase of products, (ii) administrative services rendered and (iii) financial loans among related parties. The terms and conditions of transactions with related parties were no more favorable than those available to other parties on an arm's length basis.

Under the *Ley Federal de Responsabilidades Administrativas de los Servidores Públicos* (Federal Law of Administrative Responsibilities of Public Officials), which applies to PEMEX's directors and employees, PEMEX's directors and employees are obligated to "recuse themselves from intervening in any way in the attention to, processing or resolution of matters in which they might have personal, family or business interest, including those where some benefit can result for themselves, their spouse, blood or affinity relatives up to the fourth degree, or civil relatives, or for third parties with which they have professional, labor or business relations, or for partners or partnerships where the public officials or the persons referred above are or have been members thereof".

Related parties include individuals and companies that do not form part of PEMEX, but that could take advantage of being in a privileged position as a result of their relation with PEMEX. Also included are situations in which PEMEX could take advantage of a special relationship in order to benefit its financial position or results of operations.

Prior to his appointment as Secretary of Energy, Mr. Pedro Joaquín Coldwell, Chairman of the Board of Directors of Petróleos Mexicanos since December 2012, as well as certain members of his family, held ownership interests in companies that have entered into agreements with Pemex-Refining, which are now obligations of Pemex Industrial Transformation, for the sale and purchase of gasoline and other products by certain retail service stations and a wholesale distributor, as well as the performance of other related activities. As of the date of these consolidated financial statements, their ownership interests are as follows:

<u>Company</u>	<u>Name</u>	<u>Ownership share</u>
Servicio Cozumel, S. A. de C. V. (which operates a retail service station).	Mr. Pedro Joaquín Coldwell	60%
	Mr. Pedro Oscar Joaquín Delbouis (son of Mr. Joaquín Coldwell)	20%
	Mr. Nassim Joaquín Delbouis (son of Mr. Joaquín Coldwell)	20%
	Mr. Pedro Joaquín Coldwell	40%
Planta de Combustible Cozumel, S. A. de C. V. (which operates as a wholesale distributor).	Mr. Fausto Nassim Joaquín Ibarra (father of Mr. Joaquín Coldwell)	60%
	Mr. Pedro Joaquín Coldwell	40%
Gasolinera y Servicios Juárez, S. A. de C. V. (which operates a retail service station).	Mr. Fausto Nassim Joaquín Ibarra	40%
	Mr. Ignacio Nassim Ruiz Joaquín (nephew of Mr. Joaquín Coldwell)	20%
	Mr. Pedro Joaquín Coldwell	20%
	Mr. Pedro Oscar Joaquín Delbouis	20%
Combustibles Caleta, S. A. de C. V. (which operates a retail service station).	Mr. Nassim Joaquín Delbouis	20%
	Mr. Fausto Nassim Joaquín Ibarra	20%
	Mr. Ignacio Nassim Ruiz Joaquín	20%
	Mr. Pedro Joaquín Coldwell	25%
	Mr. Pedro Oscar Joaquín Delbouis	25%
	Mr. Nassim Joaquín Delbouis	25%
Combustibles San Miguel, S. A. de C. V. (which operates a retail service station).	Mr. Ignacio Nassim Ruiz Joaquín	25%
	Mr. Pedro Oscar Joaquín Delbouis	25%
	Mr. Nassim Joaquín Delbouis	25%

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The rights of these companies to operate retail service stations and distribute gasoline and other products on a wholesale basis in Mexico are dependent on these agreements, the expiration or non-renewal of which may adversely affect their business. These agreements are based on PEMEX's standard forms of agreements and contain the standard terms and conditions applicable to all of Pemex Industrial Transformation's retail service stations and wholesale distributors.

**a. Compensation of Directors and Officers**

For the years ended December 31, 2015, 2014 and 2013, the aggregate compensation of executive officers of Petróleos Mexicanos and the Subsidiary Entities paid or accrued in that year for services in all capacities was approximately Ps. 242,056, Ps. 173,903 and Ps. 174,800, respectively. Except in the case of the professional members, with respect to the previous Board of Directors of Petróleos Mexicanos and the boards of directors of the existing Subsidiary Entities, and the independent members, with respect to the new Board of Directors of Petróleos Mexicanos, members of the Boards of Directors of Petróleos Mexicanos and the Subsidiary Entities do not receive compensation for their services.

The compensation paid or accrued during 2015, 2014 and 2013 to the professional members of the previous Board of Directors of Petróleos Mexicanos and boards of directors of the existing subsidiary entities was approximately Ps. 17,889, Ps. 12,599 and Ps. 13,600, respectively.

**b. Salary Advances**

As an employee benefit, PEMEX offers salary advances to all of its eligible Petroleum Workers' Union and non-union workers, including executive officers, pursuant to the programs set forth in the collective bargaining agreement and in the *Reglamento de Trabajo del Personal de Confianza de Petróleos Mexicanos y Organismos Subsidiarios* (Employment Regulation of White Collar Employees of Petróleos Mexicanos and Subsidiary Entities), respectively. The salary advances, which are non-interest bearing, are offered to each eligible employee in an amount up to a maximum of four months' salary and are repaid through salary deductions in equal installments over a period of either one or two years, as elected by the employee. Most employees take advantage of this benefit. The amount of salary advances outstanding to executive officers at December 31, 2015 was Ps. 25,741 and Ps. 21,724 at December 31, 2014. The amount of salary advances outstanding to executive officers at February 29, 2016 was Ps. 23,176.

**NOTE 24. COMMITMENTS**

- a. PMI CIM has entered into several contracts for the sale of crude oil on the international market to foreign companies. The terms and conditions of these contracts are specific to each client, and their durations may be indefinite (evergreen contracts) or they may contain a minimum obligatory period (long-term contracts).
- b. PEMEX has entered into a nitrogen supply contract for the pressure maintenance program at the Cantarell complex. During 2007, an additional contract was entered into with the purpose of supplying nitrogen to the Ku-Maloob-Zap complex and extending the original contract until 2027. At December 31, 2015 and 2014, the value of the nitrogen to be supplied during the term of the contract was approximately Ps. 8,920,228 and Ps. 9,381,047, respectively. In the event of the annulment of the contract and depending on the circumstances, PEMEX has the right and obligation to acquire the vendor's nitrogen plant under the terms of the contract.

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Estimated future payments under this contract for upcoming fiscal years are as follows:

2016	Ps. 1,075,544
2017	740,155
2018	740,482
2019	740,774
2020	743,097
2021 and thereafter	4,880,176
<b>Total</b>	<b><u>Ps. 8,920,228</u></b>

- c. On February 2015, PEMEX paid in advance the nitrogen supply contract for pressure maintenance at the Jujo Tecminoacán complex in the Southern region. The term of this contract would run until 2017 and as of December 31, 2014, the value of the nitrogen to be supplied during the term of the contract was Ps. 536,727. Upon the early termination of this contract, PEMEX was only required to pay for services received and for certain unrecoverable expenses of the counterparty under the terms of the contract.

- d. As of December 31, 2015, PEMEX had entered into FPWCs by means of which the contractor manages and is responsible for financing performance of the work to be undertaken.

As of December 31, 2015 and 2014, the estimated value of these contracts was as follows:

<u>Maturity</u>	<u>2015</u>	<u>2014</u>
Up to 1 year	Ps. 3,484,630	Ps. 7,570,765
1 to 3 years	1,191,247	2,588,114
4 to 5 years	1,168,858	2,539,472
More than 5 years	1,966,882	4,273,269
<b>Total</b>	<b><u>Ps. 7,811,617</u></b>	<b><u>Ps. 16,971,620</u></b>

- e. In 2015 and 2014, Pemex-Exploration and Production, as of June 1, 2015 Pemex Exploration and Production, entered into integrated exploration and production contracts ("Integrated E&P Contracts") for the development of mature fields in the Altamira, Ébano, Nejo, Pánuco and San Andrés blocks in the Northern region of Mexico and Magallanes, Santuario and Carrizo blocks in the Southern region of Mexico, respectively. Each contract has a term of up to 25 years. Payments to the contractors pursuant to the Integrated E&P Contracts will be made on a per-barrel basis, plus recovery of certain costs, provided that the payments to the contractor may not exceed PEMEX's cash flow from the particular block subject to each contract. During 2015, PEMEX made payments pursuant to the Integrated E&P Contracts in the Northern region of Ps. 12,908,720 and in the Southern region of Ps. 1,359,802. During 2014, PEMEX made payments pursuant to the Integrated E&P Contracts in the Northern region of Ps. 8,988,146 and in the Southern region of Ps. 1,926,849.

- f. As of December 31, 2015 and 2014, the estimated value of the contracts that PEMEX has entered into with several contractors for the development of various infrastructure and services works was as follows:

<u>Maturity</u>	<u>2015</u>	<u>2014</u>
Up to 1 year	Ps. 388,047,435	Ps. 260,655,822
1 to 3 years	294,020,900	243,044,188
4 to 5 years	127,885,086	74,743,512
More than 5 years	177,720,692	92,426,015
<b>Total</b>	<b><u>Ps. 987,674,113</u></b>	<b><u>Ps. 670,869,537</u></b>

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**NOTE 25. CONTINGENCIES**

In the ordinary course of business, PEMEX is named in a number of lawsuits of various types. PEMEX evaluates the merit of each claim and assesses the likely outcome. PEMEX has not recorded provisions related to ongoing legal proceedings due to the fact that an unfavorable resolution is not expected in such proceedings, with the exception of the proceeding described in further detail in this Note.

- a. PEMEX is subject to the provisions of the *Ley General del Equilibrio Ecológico y la Protección al Ambiente* (General Law on Ecological Equilibrium and Environmental Protection). To comply with this law, environmental audits of PEMEX's larger operating, storage and transportation facilities have been or are being conducted. Following the completion of such audits, PEMEX has signed various agreements with the *Procuraduría Federal de Protección al Ambiente* (Federal Attorney of Environmental Protection) to implement environmental remediation and improve environmental plans. Such plans contemplate remediation for environmental damages, as well as related investments for the improvement of equipment, maintenance, labor and materials. As of December 31, 2015 and 2014, the reserve for environmental remediation expenses totaled Ps. 3,521,838 and Ps. 6,174,754, respectively. This reserve is included as part of the reserve for sundry creditors and others as a long-term liability in the statement of financial position.
- b. PEMEX is involved in various civil, tax, criminal, administrative, labor and commercial lawsuits and arbitration proceedings. The results of these proceedings are uncertain as of the date of these consolidated financial statements. As of December 31, 2015 and 2014, PEMEX had accrued a reserve of Ps. 12,775,263 and Ps. 19,787,440, respectively, for these contingent liabilities. The current status of the principal lawsuits in which PEMEX is involved is as follows:
  - In December 2004, Corporación Mexicana de Mantenimiento Integral, S. de R. L. de C. V. ("COMMISA") filed an arbitration claim (No. 13613/CCO/JRF) before the International Court of Arbitration of the International Chamber of Commerce against Pemex-Exploration and Production for, among other things, the breach of a construction agreement in connection with two platforms in the Cantarell project (Project No. IPC01). On December 16, 2009, the International Court of Arbitration issued an arbitration award requiring Pemex-Exploration and Production to pay U.S. \$293,646 and Ps. 34,459, plus interest. On September 25, 2013, the U.S. District Court for the Southern District of New York issued a final judgment confirming the arbitration award. Pemex-Exploration and Production was ordered to pay COMMISA U.S. \$465,060, which included Pemex-Exploration and Production's U.S. \$106,828 guarantee. Each party is to pay its value added taxes and interest relating to the award. In November 2013, Pemex-Exploration and Production deposited this amount in a bank account in New York as a condition to filing its appeal with the U.S. Second Circuit Court of Appeals, which it did on January 28, 2014. On November 20, 2014, a hearing was held. On February 6, 2015, the U.S. Department of Justice filed an *amicus curiae* brief before the U.S. Second Circuit Court of Appeals to present the views of the U.S. Government with respect to the case, which were favorable to Pemex-Exploration and Production's position. As of the date of these financial statements, a final resolution is still pending. On January 22, 2013 COMMISA requested from the authorities in Luxembourg an execution of the arbitration award and an attachment of assets of Pemex-Exploration and Production and Petróleos Mexicanos located in several financial institutions. On November 15, 2013, Pemex-Exploration and Production filed a motion against the execution of the arbitration award before the Supreme Court of Justice of Luxembourg. On January 15, 2014 COMMISA also filed a motion before this Supreme Court. On March 25, 2014 Pemex-Exploration and Production filed its pleadings. In connection with the attachment of assets, COMMISA filed a motion before the Court of Appeals of Luxembourg seeking that the Court recognizes the arbitration award without considering that it was declared null and void by the Mexican courts. A hearing is expected to be held on May 2, 2016.

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- In February 2010, the *Servicio de Administración Tributaria* (the Tax Management Service) notified Pemex-Exploration and Production of the results of its review of Pemex-Exploration and Production's financial statements for the fiscal year ended December 31, 2006 with respect to federal taxes, the value added tax and the Ordinary Duty on Hydrocarbons payable by it. On September 20, 2010, the Tax Management Service determined that Pemex-Exploration and Production owed additional taxes totaling Ps. 4,575,208 (of which Pemex-Exploration and Production was notified on September 22, 2010). On November 30, 2010, Pemex-Exploration and Production filed an administrative claim before the *Tercera Sala Regional Metropolitana* (Third Regional Metropolitan Court) of the *Tribunal Federal de Justicia Fiscal y Administrativa* (Tax and Administrative Federal Court) challenging the assessment. On November 20, 2013, the *Primera Sección de la Sala Superior* (First Section of the Superior Court) of the Tax and Administrative Federal Court requested the documentation related to this trial (file No. 28733/1017037/1838/13S10504). The First Section of the Superior Court ordered the file to be sent back to the Third Regional Metropolitan Court to correct any procedural errors in order to issue a final judgment, which was sent back to the First Section of the Superior Court when the procedural errors were corrected. On March 31, 2016, this matter was discussed and as of the date of these consolidated financial statements a final judgment is still pending.
- On September 19, 2014, the Tax Management Service notified Petróleos Mexicanos (motion No. 900-07-2014-52233 dated September 8, 2014) that it had determined that Petróleos Mexicanos owed Ps. 3,581,878 for allegedly failing to properly withhold income taxes on interest payments to foreign residents during 2008, which were based on a 4.9% rate instead of a 28% rate. On November 3, 2014, Petróleos Mexicanos filed a motion to revoke the Tax Management Service's assessment, which was granted. The Tax Management Service issued a new resolution stating it had determined that Petróleos Mexicanos owed Ps. 23,261. Petróleos Mexicanos filed an administrative claim which was admitted on March 8, 2016 and the procedure suspended, giving time to the Tax Management Service to response to this claim.
- On June 11, 2015, the *Segunda Sala Regional del Noreste* (Second Regional Northeast Court) notified Pemex-Refining of an administrative claim (file no. 2383/15-06-02-4) filed by Severo Granados Mendoza, Luciano Machorro Olvera and Hilario Martínez Cerda, as President, Secretary and Treasurer of the Ejido Tepehuaje seeking Ps. 2,094,232 in damages due to hydrocarbons' spill in their land. Pemex-Refining filed a response to this claim that among other things, argued that the Second Regional Court lacked jurisdiction. The Second Regional Court agreed with Pemex-Refining and the claim was sent to the Specialized Court related to Environmental matters (file No. 3668/15-EAR-01-11), which did not admit it. The claim was sent to the First Section of the Superior Court, and as of the date of these financial statements the claim is still under review by the Court.
- In February 2010, the Tax Management Service notified Pemex-Refining of the results of its review of Pemex-Refining's financial statements for the fiscal year ended December 31, 2006 with respect to federal contributions, the value added tax and the Hydrocarbons Income Tax. On September 20, 2010, the Tax Management Service notified Pemex-Refining that it owed approximately Ps. 1,553,372 (including penalties and interest). On November 30, 2010, Pemex-Refining filed an administrative claim before the Third Regional Metropolitan Court of the Tax and Administrative Federal Court challenging the assessment. On November 20, 2013, the *Sala Superior* (Superior Court) of the Tax and Administrative Federal Court attracted the documentation related to this trial (file No. 28733/1017037/1838/13S10504). The First Section of the Superior Court ordered the file to be sent back to the Third Regional Metropolitan Court to correct any procedural errors in order to issue a final judgment, which was sent back to the First Section of the Superior Court when the procedural errors were corrected. On March 31, 2016, this matter was discussed and as of the date of these consolidated financial statements a final judgment is still pending.

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- On April 14, 2010, Petróleos Mexicanos and Pemex-Gas and Basic Petrochemicals were summoned before the *Juzgado Séptimo de Distrito* (Seventh District Court) in Reynosa, Tamaulipas, in connection with a civil claim filed by Irma Ayala Tijerina de Barroso, et al., seeking approximately Ps. 1,490,873 in damages for the alleged contamination of land adjacent to water treatment. A final judgment was issued in favor of Pemex-Gas and Basic Petrochemicals and required that each party cover its respective legal expenses, which the parties subsequently appealed. The plaintiffs filed an appeal against this resolution. Pemex-Gas and Basic Petrochemicals also filed an appeal requesting that the expenses related to these proceedings be paid by the plaintiff. As of the date of these consolidated financial statements, a final resolution is still pending.
- In February 2011, EMS Energy Services de México, S. de R.L. de C.V. and Energy Maintenance Services Group I. LLC filed a claim against Pemex-Exploration and Production before the *Juzgado Tercero de Distrito* (Third District Court) in Villahermosa, Tabasco (No. 227/2010). The plaintiffs are seeking, among other things, damages totaling U.S. \$193,713 related to the termination of a public works contract and nonpayment by Pemex-Exploration and Production under the contract. On December 31, 2014, a final judgment was issued in favor of Pemex-Exploration and Production. The plaintiff subsequently filed an appeal, which was denied on May 11, 2015. On June 3, 2015, the plaintiff filed an *amparo* (02/2015) against this resolution, which as of the date of these consolidated financial statements is still pending. In a concurrent administrative proceeding, Pemex-Exploration and Production was summoned before the Séptima Sala Regional Metropolitana (Seventh Regional Metropolitan Court) of the Tax and Administrative Federal Court on April 4, 2011 in connection with an administrative claim (No. 4957/1117071) filed by the plaintiffs seeking that Pemex-Exploration and Production's termination of the public works contract be declared null and void. On November 4, 2014, the Seventh Regional Metropolitan Court ordered the Second Section of the Superior Court (file No. 4957/11-17-07-1/1827/14-S2-08-4) to issue a final judgment. As of the date of these financial statements, a final resolution is still pending.
- On July 10, 2015, the Local Treasury of Minatitlán, Veracruz determined that Pemex-Refining owed Ps. 2,531,040 for property taxes from 2010 to 2015 related to the "General Lázaro Cárdenas" refinery. Pemex-Refining filed an *amparo* against this determination (no. 863/2015-V) before the *Juzgado Décimo de Distrito* (Tenth District Court) in Veracruz, which was granted. A hearing which was expected to be held on February 2016 was suspended and a new date has not been notified. Pemex-Refining also filed an administrative claim against this determination, which was admitted by the Court on August 6, 2015 and the trial was suspended. The defendant filed a motion seeking to dismiss the administrative claim due to the *amparo* filed by Pemex-Refining. On September 9, 2015, the Court informed that this motion will be analyzed when a judgment is to be issued. The defendant filed a review motion against this resolution, which was denied on October 1, 2015 and the defendant was notified about this refusal on March 16, 2016. As of the date of these consolidated financial statements, a final resolution is still pending.
- On July 8, 2011, Pemex-Exploration and Production was summoned in connection with an administrative claim (No. 4334/1111026) filed by Compañía Petrolera La Norma, S.A., against the Director General of Petróleos Mexicanos and the Director General of Pemex-Exploration and Production before the *Segunda Sala Regional Hidalgo-México* (Hidalgo-Mexico Second Regional Court) of the Tax and Administrative Federal Court in Tlalnepantla, State of Mexico. The plaintiff is seeking compensation in connection with the cancellation of its alleged petroleum rights concessions and damages for up to Ps. 1,552,730. On March 4, 2013, the Court permitted an amendment to the claim. In addition, on April 9, 2013 a new claim was filed before the same Court

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(438/1211023) and the defendants requested that it be joined with the previous claim, which was granted on May 2, 2013. On August 20, 2014, these proceedings were sent to the *Segunda Sección de la Sala Superior* (Second Section of the Superior Court) of the Tax and Administrative Federal Court (4334/11-11-02-6/1337/14-S2-07-04, which will issue a final judgment. On October 29, 2014, these proceedings were returned to the Second Regional Court to correct a procedural error. The trial was suspended due to an amparo filed by Pemex-Exploration and Production, which was granted. The procedural error was corrected and a new filing was made, which will be sent to the Superior Court for its resolution. As of the date of these consolidated financial statements, a final judgment is still pending.

- In connection with the arbitration proceeding filed by Conproca, S.A. de C.V. ("Conproca") on September 2001 before the International Court of Arbitration against Petróleos Mexicanos and Pemex Refining, with the prior authorization from their respective boards of directors, on June 2015 Petróleos Mexicanos and Conproca signed a settlement agreement with Conproca, with the participation of its shareholders SK Engineering and Construction Co. Ltd. and Siemens A.G., in order to resolve all disputes that arose from the reconfiguration of the refinery located in Cadereyta Nuevo León, including the arbitration and the judicial proceedings derived therefrom. During the third quarter of 2015 all necessary actions were implemented for the due performance of the settlement agreement, therefore as of the date of these financial statements this matter is concluded.

The results of these proceedings are uncertain until their final resolutions are issued by the appropriate authorities. PEMEX has recorded liabilities for loss contingencies when it is probable that a liability has been incurred and the amount thereof can be reasonably estimated. When a reasonable estimation could not be made, qualitative disclosure was provided in the notes to these consolidated financial statements.

PEMEX does not disclose amounts accrued for each individual claim because such disclosure could adversely affect PEMEX's legal strategy, as well as the outcome of the related litigation.

#### **NOTE 26. SUBSEQUENT EVENTS**

As of April 25, 2016, the Mexican peso-U.S. dollar exchange rate was Ps. 17.4202 per U.S. dollar, which represents a 1.24% depreciation of the value of the peso in U.S. dollar terms as compared to the exchange rate as of December 31, 2015, which was Ps. 17.2065 per U.S. dollar.

As of April 25, 2016, the weighted average price of the crude oil exported by PEMEX was U.S. \$33.87 per barrel. This represents a price increase of approximately 23.75% as compared to the average price as of December 31, 2015, which was U.S. \$27.37 per barrel.

As of April 25, 2016, PEMEX has valued and recorded the 20,724,331 Repsol shares acquired through PMI HBV as an available-for-sale financial asset. The market value of Repsol shares has increased approximately 9.58%, from €10.12 per share as of December 31, 2015 to €11.09 per share as of April 25, 2016.

During the period from January 1 to April 29, 2016, PEMEX participated in the following financing activities:

- On January 25, 2016, Petróleos Mexicanos increased its Medium-Term Notes Program from U.S. \$52,000,000 to U.S. \$62,000,000 pursuant to authorization by the Board of Directors of Petróleos Mexicanos on August 18, 2015.
- On January 28, 2016, subsidiaries of Pemex Fertilizers obtained loans for an aggregate amount of U.S. \$635,000 in connection with the acquisition of Grupo Fertilal, S.A.

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- On January 29, 2016, Petróleos Mexicanos obtained a loan from a line of credit for Ps. 7,000,000 bearing interest at a floating rate linked to the THIE plus 0.55%, which matures on January 27, 2017.
- On February 4, 2016, Petróleos Mexicanos issued U.S. \$5,000,000 of debt securities under its Medium-Term Notes Program, Series C, in three tranches: (i) U.S. \$750,000 of its 5.500% Notes due 2019; (ii) U.S. \$1,250,000 of its 6.375% Notes due 2021; and (iii) U.S. \$3,000,000 of its 6.875 % Notes due 2026. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- On March 15, 2016, Petróleos Mexicanos issued \$2,250,000 of debt securities U.S. \$62,000,000 Medium-Term Notes Program, Series C in two tranches: (i) \$1,350,000 of its 3.750% Notes due 2019 and (ii) \$900,000 of its 5.125% Notes due 2023. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.
- On March 17, 2016, Petróleos Mexicanos borrowed Ps. 2,000,000 from a credit line at a floating rate linked to THIE and matures in 2017.
- On March 17, 2016, Petróleos Mexicanos borrowed Ps. 3,300,000 from a credit line at a floating rate linked to THIE and matures in 2017.
- On March 22, 2016 PEMEX completed its exchange offers, resulting in the following additional amounts of bonds issued and registered with the SEC:

<u>Debt titles</u>	<u>Issuer</u>	<u>Subsidiary Guarantors</u>	<u>Pending amount of the principal (U.S. \$)</u>
3.500% Notes due 2020	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (for all of the Subsidiary Guarantors)	1,454,967
4.250% Notes due 2025	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (for all of the Subsidiary Guarantors)	997,333
4.500% Notes due 2026	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (for all of the Subsidiary Guarantors)	1,486,725
5.500% Bonds due 2044 <sup>(1)</sup>	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (for all of the Subsidiary Guarantors)	1,504,855
5.625% Bonds due 2046	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (for all of the Subsidiary Guarantors)	2,992,861

(1) With this issuance of 5.500% Bonds due 2044, the aggregate amount of 5.500% Bonds due 2044 outstanding is U.S. \$4,249,855.

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- On March 23, 2016, Petróleos Mexicanos issued Ps. 5,000,000 of Certificados Bursátiles due 2019 at a floating rate linked to THIE.
- On March 28, 2016, Petróleos Mexicanos borrowed Ps. 9,700,000 from a credit line at a floating rate linked to THIE, which matures in 2017.
- On April 19, 2016, Petróleos Mexicanos borrowed EUR €500,000 from a credit line at fixed rate of 5.11%, which matures in 2023.

Between January 1 to April 5, 2016, P.M.I. Holdings B.V. U.S. \$2,695,000 in financing from its revolving credit lines and repaid U.S. \$2,247. As of April 22, 2016, the outstanding amount under this revolving credit lines was US\$2,692,753.

On April 20, 2016, an explosion occurred in the “Planta de Clorados 3” (Chlorinated Plant 3) of the Petroquímica Mexicana de Vinilo, a company operated by Mexichem. PEMEX has a minority stake in Petroquímica Mexicana de Vinilo, which is recognized under the equity method (see Note 11). Investigations were initiated to determine the causes of this accident and any possible contingencies. As of the date of these consolidated financial statements, PEMEX cannot estimate the impact of the accident blast on its investment in Petroquímica Mexicana de Vinilo.

On 21 April 2016, the Mexican Government made an equity contribution to Petróleos Mexicanos in the amount of Ps. 26,500,000 following the guidelines established in the Federal Budget and Fiscal Responsibility. This contribution was recognized as an increase in Certificates of Contribution “A.”

**NOTE 27. SUBSIDIARY GUARANTOR INFORMATION**

The following consolidating information presents: (i) condensed consolidating statements of financial position at December 31, 2015 and 2014 and condensed consolidating statements of comprehensive income and cash flows for the years ended December 31, 2015, 2014 and 2013 of Petróleos Mexicanos, the Subsidiary Guarantors and the Non-Guarantor Subsidiaries (as defined below).

These condensed consolidating statements were prepared in conformity with IFRS, with one exception: for the purposes of the presentation of the subsidiary guarantor information, the Subsidiary Entities and Subsidiary Companies have been accounted for as investments under the equity method by Petróleos Mexicanos. Earnings of subsidiaries are therefore reflected in Petróleos Mexicanos’ investment account and earnings. The principal elimination entries eliminate Petróleos Mexicanos’ investment in subsidiaries and inter-company balances and transactions. Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (collectively, the “Subsidiary Guarantors”) and Pemex Ethylene and Pemex Fertilizers are 100%-owned subsidiaries of Petróleos Mexicanos. Pemex Ethylene, Pemex Fertilizers, Pemex Finance, Ltd. and the Subsidiary Companies collectively comprise the non-guarantor subsidiaries (the “Non-Guarantor Subsidiaries”). The guaranties by the Subsidiary Guarantors of Petróleos Mexicanos’ payment obligations under this indebtedness are full and unconditional and joint and several.

The Pemex Project Funding Master Trust (the “Master Trust”), which was a trust formed for the purpose of financing PEMEX’s projects, was dissolved effective December 20, 2011 and is no longer consolidated in the financial statements of PEMEX as of December 31, 2011 and thereafter.

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The following table sets forth, as of December 31, 2015, the principal amount outstanding of the registered debt securities originally issued by the Master Trust. As noted above, Petróleos Mexicanos has assumed, as primary obligor, all of the obligations of the Master Trust under these debt securities. The obligations of Petróleos Mexicanos are guaranteed by the Subsidiary Guarantors:

**Table 1: Registered Debt Securities originally issued by the Master Trust and Assumed by Petróleos Mexicanos**

<u>Security</u>	<u>Primary obligor</u>	<u>Guarantors</u>	<u>Principal amount outstanding (U.S. \$)</u>
5.75% Guaranteed Notes due 2018	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,483,988
6.625% Guaranteed Bonds due 2035	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,750,000
6.625% Guaranteed Bonds due 2038	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	491,175
8.625% Bonds due 2022	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	160,245
8.625% Guaranteed Bonds due 2023	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	106,507
9 1/4% Guaranteed Bonds due 2018	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	107,109
9.50% Guaranteed Bonds due 2027	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	219,217

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The following table sets forth, as of December 31, 2015, the principal amount outstanding of the registered debt securities issued by Petróleos Mexicanos, and guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.

**Table 2: Registered Debt Securities originally issued by Petróleos Mexicanos**

<u>Security</u>	<u>Issuer</u>	<u>Guarantors</u>	<u>Principal amount outstanding (U.S. \$)</u>
8.00% Notes due 2019	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,999,369
9 ¼% Global Guaranteed Bonds due 2018	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	9,296
9.50% Global Guaranteed Bonds due 2027	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	102,149
3.500% Notes due 2018	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	999,590
Floating Rate Notes due 2018	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	498,570
6.000% Notes due 2020	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	995,364
5.50% Notes due 2021	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,961,947
3.500% Notes due 2023	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,099,730
4.875% Notes due 2024	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,499,136
6.625% Notes due 2035	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	998,500
6.500% Bonds due 2041	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	3,000,000
4.875% Bonds 2022	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,097,055
5.50% Bonds due 2044	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,745,000
3.125% Notes due 2019	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	497,278
	Petróleos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and	

6.375% Bonds due 2045

Mexicanos

Pemex Cogeneration and Services

2,999,980

Petróleos Mexicanos is the only PEMEX entity that had debt securities registered with the SEC outstanding as of December 31, 2015 and as of the date of these consolidated financial statements, and all guaranteed debt is issued by Petróleos Mexicanos. The guaranties of the Subsidiary Guarantors are full and unconditional and joint and several. PEMEX's management has not presented separate financial statements for the Subsidiary Guarantors, because it has determined that such information is not material to investors.

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	<b>Petróleos Mexicanos</b>	<b>Subsidiary guarantors</b>	<b>Non-guarantor subsidiaries</b>	<b>Eliminations</b>	<b>PEMEX consolidated</b>
<b>ASSETS</b>					
Current assets					
Cash and cash equivalents	Ps. 58,461,012	Ps. 6,630,670	Ps. 44,277,198	Ps. —	Ps. 109,368,880
Accounts receivable and other, net, and derivative financial instruments	37,238,854	(34,341,755)	77,949,828	—	80,846,927
Accounts receivable—inter-company	125,742,649	900,153,311	137,229,202	(1,163,125,162)	—
Inventories	530,271	31,959,005	11,281,652	—	43,770,928
Held-for-sale non-financial assets	—	33,213,762	—	—	33,213,762
Total current assets	221,972,786	937,614,993	270,737,880	(1,163,125,162)	267,200,497
Available-for-sale financial assets	—	—	3,944,696	—	3,944,696
Long-term receivables—intercompany	1,274,568,094	313	6,061,687	(1,280,630,094)	—
Permanent investments in associates	(246,924,369)	7,607,632	16,544,953	246,937,383	24,165,599
Wells, pipelines, properties, plant and equipment-net	11,810,768	1,280,347,602	52,325,261	—	1,344,483,631
Deferred taxes	52,242,786	2,168,657	488,941	—	54,900,384
Restricted cash	—	8,010,298	1,236,474	—	9,246,772
Intangible assets	—	14,304,961	—	—	14,304,961
Other assets	51,559,054	2,528,699	3,319,906	—	57,407,660
Total assets	Ps. 1,365,229,120	Ps. 2,252,583,155	Ps. 354,659,798	Ps. (2,196,817,873)	Ps. 1,775,654,200
<b>LIABILITIES</b>					
Current liabilities					
Current portion of long-term debt	Ps. 183,985,562	Ps. 5,933,027	Ps. 2,590,079	Ps. —	Ps. 192,508,668
Accounts payable—inter-company	915,533,239	162,455,837	76,784,232	(1,154,773,308)	—
Other current liabilities	35,189,773	195,646,938	20,062,342	—	250,899,053
	1,134,708,574	364,035,802	99,436,653	(1,154,773,308)	443,407,721
Total current liabilities					
Long-term debt	1,271,921,360	11,589,261	17,362,546	—	1,300,873,167
Long-term payables—inter-company	—	1,281,683,849	7,298,100	(1,288,981,949)	—
Employee benefits, provisions for sundry creditors, other liabilities and deferred taxes	290,528,362	944,461,253	128,059,595	—	1,363,049,210
Total liabilities	2,697,158,296	2,601,770,165	252,156,894	(2,443,755,257)	3,107,330,098
Equity (deficit), net	(1,331,929,176)	(349,187,010)	102,502,904	246,937,384	(1,331,675,898)
Total liabilities and equity	Ps. 1,365,229,120	Ps. 2,252,583,155	Ps. 354,659,798	Ps. (2,196,817,873)	Ps. 1,775,654,200

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	<b>Petróleos Mexicanos</b>	<b>Subsidiary guarantors</b>	<b>Non-guarantor subsidiaries</b>	<b>Eliminations</b>	<b>PEMEX consolidated</b>
<b>ASSETS</b>					
Current assets					
Cash and cash equivalents	Ps. 73,002,640	Ps. 5,407,420	Ps. 39,578,468	Ps. —	Ps. 117,988,528
Accounts receivable and other, net, and derivative financial instruments	25,760,345	41,577,264	48,647,914	—	115,985,523
Accounts receivable—inter-company	349,727,804	856,239,256	101,974,733	(1,307,941,793)	—
Inventories	638,839	36,506,849	12,792,968	—	49,938,656
Available-for-sale financial assets	—	—	5,414,574	—	5,414,574
Total current assets	449,129,628	939,730,789	208,408,657	(1,307,941,793)	289,327,281
Long-term receivables—inter-company	985,135,404	3,626,448	5,788,386	(994,550,238)	—
Permanent investments in associates	60,586,885	6,940,848	15,060,898	(60,573,871)	22,014,760
Wells, pipelines, properties, plant and equipment-net	11,285,140	1,724,548,862	47,540,136	—	1,783,374,138
Deferred taxes	(124,002)	84,215	4,182,405	—	4,142,618
Restricted cash	35,887	6,848,332	—	—	6,884,219
Intangible assets	—	14,970,904	—	—	14,970,904
Other assets	1,409,235	2,798,939	3,446,186	—	7,654,360
Total assets	<u>Ps. 1,507,458,177</u>	<u>Ps. 2,699,549,337</u>	<u>Ps. 284,426,668</u>	<u>Ps. (2,363,065,902)</u>	<u>Ps. 2,128,368,280</u>
<b>LIABILITIES</b>					
Current liabilities					
Current portion of long-term debt	Ps. 128,491,432	Ps. 7,801,195	Ps. 9,573,590	Ps. —	Ps. 145,866,217
Accounts payable—inter-company	823,273,747	421,946,125	55,470,068	(1,300,689,940)	—
Other current liabilities	29,430,111	139,237,945	19,625,074	—	188,293,130
Total current liabilities	981,195,290	568,985,265	84,668,732	(1,300,689,940)	334,159,347
Long-term debt	978,651,122	7,769,492	10,963,672	—	997,384,286
Long-term payables—inter-company	3,626,448	991,800,516	6,375,128	(1,001,802,092)	—
Employee benefits, provisions for sundry creditors, other liabilities and deferred taxes	312,050,990	1,100,084,554	152,409,957	—	1,564,545,501
Total liabilities	2,275,523,850	2,668,639,827	254,417,489	(2,302,492,032)	2,896,089,134
Equity (deficit), net	(768,065,673)	30,909,510	30,009,179	(60,573,870)	(767,720,854)
Total liabilities and equity	<u>Ps. 1,507,458,177</u>	<u>Ps. 2,699,549,337</u>	<u>Ps. 284,426,668</u>	<u>Ps. (2,363,065,902)</u>	<u>Ps. 2,128,368,280</u>

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	<b>Petróleos Mexicanos</b>	<b>Subsidiary guarantors</b>	<b>Non-guarantor subsidiaries</b>	<b>Eliminations</b>	<b>PEMEX consolidated</b>
Net sales	Ps. 15,556	Ps. 1,523,767,800	Ps. 803,623,324	Ps. (1,173,956,323)	Ps. 1,153,450,357
Services income	16,897,139	16,815,589	7,187,694	(27,988,310)	12,912,112
Total sales revenues	16,912,695	1,540,583,389	810,811,018	(1,201,944,633)	1,166,362,469
Impairment of wells, pipelines, properties, plant and equipment	—	476,276,159	1,668,531	—	477,944,690
Benefit of the period of employee benefits	—	(83,657,496)	(8,519,593)	—	(92,177,089)
Cost of sales	2,695,423.00	1,280,404,059	794,252,043	(1,182,282,621)	895,068,904
Gross income	14,217,272	(132,439,333)	23,410,037	(19,662,012)	(114,474,036)
Other (expenses) revenues, net	(19,805)	(6,073,003)	1,828,642	1,890,900	(2,373,266)
General expenses:					
Transportation, distribution and sale expenses	—	32,870,908	2,921,430	(6,863,699)	28,928,639
Administrative expenses	59,923,878	52,832,029	10,638,127	(10,921,939)	112,472,095
Benefit of the period of employee benefits	(46,031,780)	(50,394,477)	(7,434,698)	—	(103,860,955)
Total general expenses	13,892,098	35,308,460	6,124,859	(17,785,638)	37,539,779
Operating income	305,369	(173,820,796)	19,113,820	14,526	(154,387,081)
Financing income	108,543,665	28,639,034	3,478,434	(125,670,274)	14,990,859
Financing cost	(85,544,060)	(104,453,148)	(3,306,776)	125,530,391	(67,773,593)
Derivative financial instruments (cost) income, net	(22,803,663)	6,463	1,347,323	—	(21,449,877)
Exchange loss, net	(14,829,436)	(139,623,910)	(312,228)	—	(154,765,574)
(Loss) profit sharing in associates	(749,963,960)	198,786	2,119,329	749,963,960	2,318,115
(Loss) income before taxes, duties and other	(764,292,085)	(389,053,571)	22,439,902	749,838,603	(381,067,151)
Total taxes, duties and other	(51,982,560)	376,649,369	6,833,438	—	331,500,247
Net (loss) income for the year	(712,309,525)	(765,702,940)	15,606,464	749,838,603	(712,567,398)
Total other comprehensive result	10,980,787	56,585,790	21,045,777	—	88,612,354
Total comprehensive result for the year	Ps. (701,328,738)	Ps. (709,117,150)	Ps. 36,652,241	Ps. 749,838,603	Ps. (623,955,044)

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	<b>Petróleos Mexicanos</b>	<b>Subsidiary guarantors</b>	<b>Non-guarantor subsidiaries</b>	<b>Eliminations</b>	<b>PEMEX consolidated</b>
Net sales	Ps. 18,998	Ps. 2,213,875,692	Ps. 1,108,487,220	Ps. (1,747,092,618)	Ps. 1,575,289,292
Services income	64,245,159	6,055,328	6,426,288	(65,288,193)	11,438,582
Total sales revenues	64,264,157	2,219,931,020	1,114,913,508	(1,812,380,811)	1,586,727,874
Impairment of wells, pipelines, properties, plant and equipment	—	21,199,704	1,445,992	—	22,645,696
Cost of sales	2,663,293	1,492,165,034	1,106,898,998	(1,759,092,541)	842,634,784
Gross income	61,600,864	706,566,282	6,568,518	(53,288,270)	721,447,394
Other (expenses) revenues, net	514,056	36,518,256	778,682	(258,597)	37,552,397
General expenses:					
Transportation, distribution and sale expenses	—	34,095,556	1,555,276	(3,468,166)	32,182,666
Administrative expenses	57,654,464	86,112,895	17,701,494	(50,131,739)	111,337,114
Total general expenses	57,654,464	120,208,451	19,256,770	(53,599,905)	143,519,780
Operating income	4,460,456	622,876,087	(11,909,570)	53,038	615,480,011
Financing income	85,565,363	17,696,814	3,106,401	(103,354,391)	3,014,187
Financing cost	(67,194,647)	(84,756,651)	(2,973,111)	103,365,349	(51,559,060)
Derivative financial instruments (cost) income, net	(13,858,680)	8,116	4,411,994	—	(9,438,570)
Exchange loss, net	(7,859,495)	(69,076,040)	(63,626)	—	(76,999,161)
(Loss) profit sharing in associates	(263,219,388)	487,365	(452,997)	263,219,388	34,368
(Loss) income before taxes, duties and other	(262,106,391)	487,235,691	(7,880,909)	263,283,384	480,531,775
Total taxes, duties and other	3,160,818	738,855,418	4,058,528	—	746,074,764
Net (loss) income for the year	(265,267,209)	(251,619,727)	(11,939,437)	263,283,384	(265,542,989)
Total other comprehensive result	(62,426,587)	(189,804,290)	(13,117,248)	—	(265,348,125)
Total comprehensive result for the year	Ps. (327,693,796)	Ps. (441,424,017)	Ps. (25,056,685)	Ps. 263,283,384	Ps. (530,891,114)

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For the year ended December 31, 2013**

	<b>Petróleos Mexicanos</b>	<b>Subsidiary guarantors</b>	<b>Non-guarantor subsidiaries</b>	<b>Eliminations</b>	<b>PEMEX consolidated</b>
Net sales	Ps. 22,115	Ps. 2,283,326,517	Ps. 1,136,284,419	Ps. (1,821,767,783)	Ps. 1,597,865,268
Services income	55,361,187	6,305,400	5,394,402	(56,721,632)	10,339,357
Total sales revenues	55,383,302	2,289,631,917	1,141,678,821	(1,878,489,415)	1,608,204,625
Impairment of wells, pipelines, properties, plant and equipment	—	26,364,717	(755,882)	—	25,608,835
Cost of sales	1,478,302	1,507,556,220	1,126,452,214	(1,821,480,398)	814,006,338
Gross income	53,905,000	755,710,980	15,982,489	(57,009,017)	768,589,452
Other (expenses) revenues, net	(1,629,063)	97,687,870	(5,631,905)	(291,217)	90,135,685
General expenses:					
Transportation, distribution and sale expenses	—	31,612,865	1,276,529	(440,958)	32,448,436
Administrative expenses	52,176,527	87,089,702	16,332,061	(56,943,818)	98,654,472
Total general expenses	52,176,527	118,702,567	17,608,590	(57,384,776)	131,102,908
Operating income	99,410	734,696,283	(7,258,006)	84,542	727,622,229
Financing income	66,513,514	28,629,988	3,503,308	(89,911,111)	8,735,699
Financing cost	(62,400,459)	(63,677,174)	(3,295,021)	89,786,170	(39,586,484)
Derivative financial instruments (cost) income, net	2,631,986	(33,305)	(1,287,708)	—	1,310,973
Exchange loss, net	(305,581)	(3,441,388)	(204,523)	—	(3,951,492)
(Loss) profit sharing in associates	(173,928,884)	1,141,059	(434,349)	173,928,884	706,710
(Loss) income before taxes, duties and other	(167,390,014)	697,315,463	(8,976,299)	173,888,485	694,837,635
Total taxes, duties and other	2,475,621	858,504,381	3,916,060	—	864,896,062
(Loss) income before taxes, duties and other	(169,865,635)	(161,188,918)	(12,892,359)	173,888,485	(170,058,427)
Total other comprehensive result	25,443,543	194,725,595	34,101,029	—	254,270,167
Comprehensive result for the year	Ps. (144,422,092)	Ps. 33,536,677	Ps. 21,208,670	Ps. 173,888,485	Ps. 84,211,740

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	<u>Petróleos Mexicanos</u>	<u>Subsidiary guarantors</u>	<u>Non-guarantor subsidiaries</u>	<u>Eliminations</u>	<u>PEMEX consolidated</u>
<b>Operating activities:</b>					
<b>Net (loss) income for the year</b>	Ps. (712,177,124)	Ps.(765,702,826)	Ps. 15,738,868	Ps. 749,573,684	Ps.(712,567,398)
<b>Adjustments to reconcile net loss to cash provided by operating activities:</b>					
Depreciation and amortization	789,657	164,221,429	2,940,164	—	167,951,250
Impairment of wells, pipelines, properties, plant and equipment	—	476,276,159	1,668,531	—	477,944,690
Unsuccessful wells	—	23,213,519	—	—	23,213,519
Disposal of wells, pipelines, properties, plant and equipment	180,992	21,945,266	2,512,279	—	24,638,537
Profit (loss) sharing in associates	749,963,958	(198,786)	(2,119,329)	(749,963,958)	(2,318,115)
Net profit (loss) on available-for-sale financial assets	—	(337,675)	(342,955)	—	(680,630)
Dividends	—	—	(359,941)	—	(359,941)
Effects of net present value of reserve for well abandonment	—	(608,160)	—	—	(608,160)
Amortization expenses related to debt issuance	(2,299,657)	—	—	—	(2,299,657)
Unrealized foreign exchange loss (gain)	145,971,158	2,996,219	3,708,879	—	152,676,256
Interest expense	63,460,443	3,414,430	898,720	—	67,773,593
<b>Funds provided by (used in) operating activities:</b>					
Accounts receivable, accounts payable and derivative financial instruments	(58,554,144)	119,761,648	(27,777,939)	—	33,429,565
Inventories	108,568	4,547,843	1,511,317	—	6,167,728
Other assets	(149,819)	(16,578,827)	126,281	—	(16,602,365)
Employee benefits	(10,037,444)	(94,183,192)	(11,801,596)	—	(116,022,232)
Inter-company charges and deductions	(310,384,820)	30,044,041	31,975,215	248,365,564	—
<b>Cash flows provided by operating activities</b>	(133,128,232)	(31,188,912)	18,678,494	247,975,290	102,336,640
<b>Investing activities:</b>					
Acquisition of wells, pipelines, properties, plant and equipment	(1,496,277)	(239,315,507)	(12,702,217)	—	(253,514,001)
Available-for-sale financial assets	—	—	(36,214)	—	(36,214)
Investments in associates	—	(5,698,511)	—	—	(5,698,511)
Exploration costs	—	(130,323)	4,547,461	—	4,417,138
Received dividends	(39,108,879)	—	—	39,108,879	—
(Increase) decrease due to Inter-company investing	(40,605,156)	(245,144,341)	(8,190,970)	39,108,879	(254,831,588)
<b>Cash flows used in investing activities</b>	(40,605,156)	(245,144,341)	(8,190,970)	39,108,879	(254,831,588)
<b>Financing activities:</b>					
Increase in equity of subsidiary entities	10,000,000	(1,915,922)	1,844,394	71,528	10,000,000
Loans obtained from financial institutions	345,383,990	—	33,587,088	—	378,971,078
Debt payments, principal only	(145,628,200)	(8,081,177)	(37,609,464)	—	(191,318,841)
Interest paid	(58,123,368)	(3,443,923)	(1,169,859)	—	(62,737,150)
Inter-company increase (decrease) financing	(3,626,448)	289,859,193	922,972	(287,155,717)	—
<b>Cash flows provided by financing activities:</b>	148,005,974	276,418,151	(2,424,869)	(287,084,169)	134,915,087
Net (decrease) increase in cash and cash equivalents	(25,727,414)	84,898	8,062,655.00	—	(17,579,861)
Effects of change in cash value	11,185,788	1,138,356	(3,363,931)	—	8,960,213
Cash and cash equivalents at the beginning of the year	73,002,640	5,407,420	39,578,468	—	117,988,528
<b>Cash and cash equivalents at the end of the year</b>	<u>Ps. 58,461,014</u>	<u>Ps. 6,630,674</u>	<u>Ps. 44,277,192</u>	<u>Ps. —</u>	<u>Ps. 109,368,880</u>

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**SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL  
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For the year ended December 31, 2014**

	<u>Petróleos Mexicanos</u>	<u>Subsidiary guarantors</u>	<u>Non-guarantor subsidiaries</u>	<u>Eliminations</u>	<u>PEMEX consolidated</u>
<b>Operating activities:</b>					
<b>Net (loss) income for the year</b>	Ps.(265,267,209)	Ps.(251,619,727)	Ps. (11,939,437)	Ps .263,283,384	Ps.(265,542,989)
<b>Adjustments to reconcile net loss to cash provided by operating activities:</b>					
Depreciation and amortization	744,081	139,522,310	2,808,396	—	143,074,787
Impairment of wells, pipelines, properties, plant and equipment	—	21,199,704	1,445,992	—	22,645,696
Unsuccessful wells	—	12,148,028	—	—	12,148,028
Disposal of wells, pipelines, properties, plant and equipment	211,414	3,499,602	2,659,921	—	6,370,937
Net loss (profit) on available-for-sale financial assets	—	—	215,119	—	215,119
Profit (loss) sharing in associates	263,559,164	(487,365)	452,997	(263,559,164)	(34,368)
Dividends	—	—	(736,302)	—	(736,302)
Effects of net present value of reserve for well abandonment	—	9,169,327	—	—	9,169,327
Amortization expenses related to debt issuance	312,296	—	—	—	312,296
Unrealized foreign exchange loss (gain)	75,053,801	1,903,282	1,927,634	—	78,884,717
Interest expense	44,969,920	5,084,856	854,848	—	50,909,624
<b>Funds provided by (used in) operating activities:</b>					
Accounts receivable, accounts payable and derivative financial instruments	14,951,048	(19,048,441)	14,075,687	—	9,978,294
Inventories	20,413	(5,046,019)	12,001,450	—	6,975,844
Other assets	(227,438)	(17,819,505)	(937,934)	—	(18,984,877)
Employee benefits	17,913,078	52,988,257	8,068,673	—	78,970,008
Inter-company charges and deductions	(274,747,392)	37,103,048	(13,393,984)	251,038,328	—
<b>Cash flows provided by operating activities</b>	<u>(122,506,824)</u>	<u>(11,402,643)</u>	<u>17,503,050</u>	<u>250,762,548</u>	<u>134,356,131</u>
<b>Investing activities:</b>					
Acquisition of wells, pipelines, properties, plant and equipment	(2,574,431)	(215,531,732)	(12,572,707)	—	(230,678,870)
Available-for-sale financial assets	—	—	12,735,337	—	12,735,337
(Increase) decrease due to Inter-company investing	—	—	(3,466,447)	—	(3,466,447)
Exploration costs	—	(1,593,706)	—	—	(1,593,706)
Received dividends	—	—	336,095	—	336,095
Investments in associates	7,942,930	—	—	(7,942,930)	—
<b>Cash flows used in investing activities</b>	<u>5,368,499</u>	<u>(217,125,438)</u>	<u>(2,967,722)</u>	<u>(7,942,930)</u>	<u>(222,667,591)</u>
<b>Financing activities:</b>					
Increase in equity of subsidiary entities	22,000,000	—	—	—	22,000,000
Withdrawal of Mexican Government contributions	(73,583,100)	—	—	—	(73,583,100)
Loans obtained from financial institutions	320,893,270	—	102,506,205	—	423,399,475
Debt payments, principal only	(93,488,805)	(7,748,079)	(106,218,608)	—	(207,455,492)
Interest paid	(41,091,971)	(5,105,446)	(1,051,061)	—	(47,248,478)
Inter-company increase (decrease) financing	687,961	240,568,067	1,563,590	(242,819,618)	—
<b>Cash flows provided by financing activities:</b>	<u>135,417,355</u>	<u>227,714,542</u>	<u>(3,199,874)</u>	<u>(242,819,618)</u>	<u>117,112,405</u>
Net (decrease) increase in cash and cash equivalents	18,279,030	(813,539)	11,335,454	—	28,800,945
Effects of change in cash value	4,592,205	889,057	2,960,602	—	8,441,864
Cash and cash equivalents at the beginning of the year	50,131,405	5,331,902	25,282,412	—	80,745,719
<b>Cash and cash equivalents at the end of the year</b>	<u>Ps. 73,002,640</u>	<u>Ps. 5,407,420</u>	<u>Ps. 39,578,468</u>	<u>Ps. —</u>	<u>Ps. 117,988,528</u>

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	<u>Petróleos Mexicanos</u>	<u>Subsidiary guarantors</u>	<u>Non-guarantor subsidiaries</u>	<u>Eliminations</u>	<u>PEMEX consolidated</u>
<b>Operating activities:</b>					
<b>Net income (loss) for the year</b>	Ps.(169,865,634)	Ps.(161,188,918)	Ps. (12,892,360)	Ps. 173,888,485	Ps.(170,058,427)
<b>Adjustments to reconcile net loss to cash provided by operating activities:</b>					
Depreciation and amortization	686,088	145,329,809	2,475,807	—	148,491,704
Impairment of wells, pipelines, properties, plant and equipment	—	26,364,717	(755,882)	—	25,608,835
Unsuccessful Wells	—	12,497,726	—	—	12,497,726
Disposal of wells, pipelines, properties, plant and equipment	24,668	7,744,792	6,930,160	—	14,699,620
Profit (loss) sharing in associates	173,258,510	(1,141,058)	434,349	(173,258,511)	(706,710)
Dividends	—	—	(914,116)	—	(914,116)
Effects of net present value of reserve for well abandonment	—	(5,240,305)	—	—	(5,240,305)
Gain on sale of properties, plant and equipment	—	—	(768,000)	—	(768,000)
Net (profit) loss on available-for-sale financial assets	(278,842)	—	—	—	(278,842)
Amortization expenses related to debt issuance	(1,037,663)	(853,047)	—	—	(1,890,710)
Unrealized foreign exchange loss (gain)	2,836,523	(172,772)	644,548	—	3,308,299
Interest expense	36,108,777	2,077,850	1,117,316	—	39,303,943
<b>Funds provided by (used in) operating activities:</b>					
Accounts receivable	(5,132,196)	16,451,312	(4,077,897)	—	7,241,219
Inventories	(125)	840,283	(907,088)	—	(66,930)
Other assets	667,515	(14,081,007)	507,576	—	(12,905,916)
Accounts payable and accrued expenses	1,695,525	57,495,890	(5,219,423)	—	53,971,992
Employee benefits	34,961,922	36,848,133	6,233,085	—	78,043,140
Inter-company charges and deductions	(89,826,553)	162,188,266	37,867,036	(110,228,749)	—
<b>Cash flows provided by operating activities</b>	<u>(15,901,485)</u>	<u>285,161,671</u>	<u>30,675,111</u>	<u>(109,598,775)</u>	<u>190,336,522</u>
<b>Investing activities:</b>					
Acquisition of wells, pipelines, properties, plant and equipment	(916,477)	(233,834,924)	(10,876,153)	—	(245,627,554)
(Increase) decrease due to Inter-company investing	(71,142,378)	(111,826,436)	—	182,968,814	—
Available-for-sale financial assets	2,869,883	—	—	—	2,869,883
Exploration costs	—	(1,438,685)	—	—	(1,438,685)
Investments in associates	(2,066,366)	(244,823)	2,311,189	—	—
<b>Cash flows used in investing activities</b>	<u>(71,255,338)</u>	<u>(347,344,868)</u>	<u>(8,564,964)</u>	<u>182,968,814</u>	<u>(244,196,356)</u>
<b>Financing activities:</b>					
Increase in equity due to Mexican Government contributions	66,583,100	206,288	231,705	(437,993)	66,583,100
Decrease in equity due to withdrawal of Mexican Government contributions	(65,000,000)	581,839	(231,704)	(350,135)	(65,000,000)
Loans obtained from financial institutions	155,545,511	—	81,409,522	—	236,955,033
Debt payments, principal only	(86,279,510)	(10,499,109)	(94,367,472)	—	(191,146,091)
Interest paid	(35,192,692)	(1,172,776)	(767,632)	—	(37,133,100)
Inter-company (decrease) increase financing	702,864	71,203,090	675,957	(72,581,911)	—
<b>Cash flows provided by financing activities</b>	<u>36,359,273</u>	<u>60,319,332</u>	<u>(13,049,624)</u>	<u>(73,370,039)</u>	<u>10,258,942</u>
Net (decrease) increase in cash and cash equivalents	(50,797,550)	(1,863,865)	9,060,523	—	(43,600,892)
Effects of change in cash value	4,141,601	—	970,119	—	5,111,720
Cash and cash equivalents at the beginning of the year	96,787,354	7,195,766	15,251,771	—	119,234,891
<b>Cash and cash equivalents at the end of the year</b>	<u>Ps. 50,131,405</u>	<u>Ps. 5,331,901</u>	<u>Ps. 25,282,413</u>	<u>Ps. —</u>	<u>Ps. 80,745,719</u>

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**NOTE 28. SUPPLEMENTARY INFORMATION ON OIL AND GAS EXPLORATION AND PRODUCTION ACTIVITIES (UNAUDITED)**

Under the Political Constitution of the United Mexican States, all crude oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by PEMEX. In August 2014, through the Round Zero process, the Mexican Government granted PEMEX the right to extract, but not own, certain petroleum and other hydrocarbon reserves in Mexico through assignment deeds.

This note provides supplementary information on the oil and gas exploration, development and production activities of Pemex Exploration and Production in compliance with the U.S. Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 932 10-5 "Extractive Activities—Oil and Gas" ("ASC Topic 932") and Accounting Standards Update 2010-03 (see Note 3(h)).

As of the date of these consolidated financial statements, all exploration and production activities of Pemex Exploration and Production are conducted in Mexico. The supplemental data presented herein reflect information for all of Pemex Exploration and Production's oil and gas producing activities.

**a. Capitalized costs for oil and gas producing activities (unaudited):**

	<b>As of December 31,</b>		
	<b>2015</b>	<b>2014</b>	<b>2013</b>
Proved reserves	Ps. 2,102,971,025	Ps. 2,381,670,263	Ps. 2,254,784,515
Construction in progress	88,706,330	111,812,137	83,764,607
Accumulated depreciation and amortization	(1,224,690,867)	(1,122,444,895)	(994,476,861)
Net capitalized costs	Ps. 966,986,487	Ps. 1,371,037,505	Ps. 1,344,072,261

**b. Costs incurred for oil and gas property exploration and development activities (unaudited):**

	<b>As of December 31,</b>	
	<b>2015</b>	<b>2014</b>
Exploration	Ps. 44,165,179	Ps. 38,866,665
Development	161,433,414	188,950,718
Total costs incurred	Ps. 205,598,593	Ps. 227,817,383

There are no property acquisition costs, because PEMEX exploits oil reserves owned by the Mexican nation.

Exploration costs include costs of geological and geophysical studies of fields amounting to Ps. 8,119,241 and Ps. 10,143,219 for 2015 and 2014, respectively, that, in accordance with the successful efforts method of accounting, are accounted for as geological and geophysical exploration expenses.

Development costs include those costs incurred in obtaining access to proved reserves and providing facilities for extracting, treating, gathering and storing oil and gas.



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**c. Results of operations for oil and gas producing activities (unaudited):**

	<b>2015</b>	<b>2014</b>	<b>2013</b>
Revenues from sale of oil and gas	Ps. 690,591,455	Ps. 1,134,448,708	Ps. 1,250,737,299
Hydrocarbon duties	376,682,705	760,627,534	856,978,971
Production costs (excluding taxes)	177,774,082	156,134,037	134,645,739
Other costs and expenses	20,360,540	35,978,232	40,599,327
Exploration expenses	31,244,564	22,291,247	22,661,332
Depreciation, depletion, amortization and accretion	527,014,056	144,384,138	119,161,541
	<u>1,133,075,947</u>	<u>1,119,415,188</u>	<u>1,174,046,910</u>
Results of operations for oil and gas producing activities	Ps. (442,484,491)	Ps. 15,033,520	Ps. 76,690,389

Note: Numbers may not total due to rounding.

**d. Sales prices (unaudited)**

The following table summarizes average sales prices in U.S. dollars for each of the years ended December 31 (excluding production taxes):

	<b>2015</b>	<b>2014</b>	<b>2013</b>
Weighted average sales price per barrel of oil equivalent (boe) <sup>(1)</sup>	U.S. \$ 37.17	U.S. \$ 71.44	U.S. \$ 76.81
Crude oil, per barrel	48.22	90.37	99.92
Natural gas, per thousand cubic feet	3.78	5.71	4.93

(1) To convert dry gas to barrels of oil equivalent, a factor of 5.201 thousand cubic feet of dry gas per barrel of oil equivalent is used.

**e. Crude oil and natural gas reserves (unaudited)**

Under the Political Constitution of the United Mexican States, all oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by PEMEX. Under the Petróleos Mexicanos Law, Pemex Exploration and Production has the right to extract, but not own, these reserves, and to sell the resulting production. The exploration and development activities of Petróleos Mexicanos and the subsidiary entities are limited to reserves located in Mexico.

Proved oil and natural gas reserves are those estimated quantities of crude oil, natural gas and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be economically producible from a given date forward, from known reservoirs and under existing economic conditions, operating methods and government regulations.

Proved reserves estimates as of December 31, 2015 were prepared by the exploration and production segment and were reviewed by the Independent Engineering Firms (as defined below), which audit the exploration and production segment's estimates of hydrocarbon reserves. In addition, pursuant to the *Reglamento de la Ley de Hidrocarburos* (Regulations to the Hydrocarbons Law), on March 31, 2016 the NHC reviewed and approved the proved reserves estimates as of December 31, 2015.

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Pemex Exploration and Production estimated reserves based on generally accepted petroleum engineering and evaluation methods and procedures, which are based primarily on applicable SEC regulations and, as necessary, the SPE's publication entitled Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information, dated February 19, 2007 and other SPE publications, including the SPE's publication entitled Petroleum Resources Management System, as well as other technical sources, including Estimation and Classification of Reserves of Crude Oil, Natural Gas, and Condensate, by Chapman Cronquist, and Determination of Oil and Gas Reserves, Petroleum Society Monograph Number 1, published by the Canadian Institute of Mining and Metallurgy & Petroleum. The choice of method or combination of methods employed in the analysis of each reservoir is determined by:

- Experience in the area;
- Stage of development;
- Quality and completeness of basic data; and
- Production and pressure histories.

Reserves data set forth herein represent only estimates. Reserves valuation is a subjective process of estimating underground accumulations of crude oil and natural gas that cannot be measured in an exact manner. The accuracy of any reserves estimate depends on the quality of available data, engineering and geological interpretation and professional judgment. As a result, estimates of different engineers may vary. In addition, the results of drilling, testing and producing subsequent to the date of an estimate may lead to the revision of an estimate.

During 2015 and 2014, PEMEX did not record any material increase in PEMEX's hydrocarbons reserves as a result of the use of new technologies.

In order to ensure the reliability of PEMEX's reserves estimation efforts, it has undertaken the internal certification of its estimates of reserves since 1996. PEMEX has established certain internal controls in connection with the preparation of its proved reserves estimates. Initially, teams of geoscientists from Pemex Exploration and Production's exploration and exploitation business units (with each of these units covering several projects) prepare the reserves estimates, using distinct estimation processes for valuations relating to new discoveries and developed fields, respectively. Subsequently, the regional reserves offices collect these reserves estimates from the units and request that the *Gerencia de Recursos y Certificación* (Office of Resources and Reserves Certification), the central hydrocarbon reserves management body of Pemex Exploration and Production, review and certify such valuations and the booking of the related reserves. This internal certification process is undertaken in accordance with internal guidelines for estimating and classifying proved reserves, which are based on the SEC's rules and definitions. The Hydrocarbons Reserves and Resources Management Office, which additionally oversees and conducts an internal audit of the above process, consists entirely of professionals with geological, geophysical, petrophysical and reservoir engineering backgrounds. The engineers who participate in PEMEX's reserves estimation process are experienced in: reservoir numerical simulation; well drilling and completion; pressure, volume and temperature (PVT) analysis; NODALTM (an analytical tool used in forecasting the performance of the various elements comprising the production system) analysis; and design strategies in petroleum field development. Furthermore, all of PEMEX's personnel have been certified by the *Secretaría de Educación Pública* (Ministry of Public Education), most have earned master's degrees in areas of study such as petroleum engineering, geology and geophysical engineering and they possess an average of over ten years of professional experience.

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In addition to this internal review process, Pemex Exploration and Production's final reserves estimates are audited by independent engineering firms. Three independent engineering firms audited Pemex Exploration and Production's estimates of proved reserves as of December 31, 2015: Netherland Sewell International, S. de R. L. de C. V. ("Netherland Sewell"); DeGolyer and MacNaughton; and Ryder Scott Company, L.P. ("Ryder Scott," and, together with Netherland Sewell and DeGolyer and MacNaughton, the "Independent Engineering Firms"). The reserves estimates reviewed by the Independent Engineering Firms totaled 88.0% of PEMEX's estimated proved reserves. The remaining 12.0% of PEMEX's estimated proved reserves consisted of reserves located in certain areas in which third parties provide drilling services to Pemex Exploration and Production. Under such agreements, the corresponding third party is responsible for assessing the volume of reserves. Netherland Sewell audited the reserves in the Poza Rica-Altamira and Litoral de Tabasco business units, DeGolyer and MacNaughton in Burgos and Veracruz business units and Ryder Scott audited the reserves in the Bellota-Jujo, Cinco Presidentes, Macuspana-Muspac, Samaria-Luna, Abkatún-Pol-Chuc, Cantarell and Ku-Maloob-Zaap business units. The audits conducted by the Independent Engineering Firms consisted primarily of: (1) analysis of historical static and dynamic reservoir data provided by Pemex Exploration and Production; (2) construction or updating of the Independent Engineering Firms' own static and dynamic reservoir characterization models of Mexican oil fields; (3) economic analysis of selected fields; and (4) review of Pemex Exploration and Production's production forecasts and reserves estimates.

Since reserves estimates are, by definition, only estimates, they cannot be reviewed for the purpose of verifying exactness. Instead, the Independent Engineering Firms conducted a detailed review of Pemex Exploration and Production's reserves estimates so that they could express an opinion as to whether, in the aggregate, the reserves estimates that PEMEX furnished were reasonable and had been estimated and presented in conformity with generally accepted petroleum engineering and evaluation methods and procedures.

All questions, including any suggested modifications to proved reserves estimates, that arose during the Independent Engineering Firms' review process were resolved by Pemex Exploration and Production to the satisfaction of the Independent Engineering Firms. The Independent Engineering Firms have concluded that PEMEX's estimated total proved oil and natural gas reserve volumes set forth in this report are, in the aggregate, reasonable and have been prepared in accordance with [Rule 4-10(a)] are consistent with international reserves reporting practice and are in accordance with the revised oil and gas reserves disclosure provisions of ASC Topic 932.

PEMEX's total proved developed and undeveloped reserves of crude oil, condensates and liquefiable hydrocarbons recoverable from field processing plants decreased by 22.5% in 2015, from 10,292 million barrels at December 31, 2014 to 7,977 million barrels at December 31, 2015. PEMEX's proved developed reserves of crude oil, condensates and liquefiable hydrocarbons recoverable from processing plants decreased by 19.8% in 2015, from 7,141 million barrels at December 31, 2014 to 5,724 million barrels at December 31, 2015. These decreases were principally due to the decrease in production of oil in 2015, low prices of hydrocarbons, as well as a decrease in field development activities. The amount of crude oil, condensate and liquefiable hydrocarbon reserves added in 2015 were insufficient to offset the level of production in 2015, which amounted to 935 million barrels of crude oil, condensates and liquefiable hydrocarbons.

PEMEX's total proved developed and undeveloped dry gas reserves decreased by 20.7% in 2015, from 10,859 billion cubic feet at December 31, 2014 to 8,610 billion cubic feet at December 31, 2015. PEMEX's proved developed dry gas reserves decreased by 10.8% in 2015, from 6,740 billion cubic feet at December 31, 2014 to 6,012 billion cubic feet at December 31, 2015. These decreases were principally due to the decrease in production of gas in 2015, low prices of hydrocarbons, as well as a decrease in field development activities. The amount of dry gas reserves added in 2015 was insufficient to offset the level of production in 2015, which amounted to 1,341 billion cubic feet of dry gas. Our proved undeveloped dry gas reserves decreased by 36.9% in 2015, from 4,119 billion cubic feet at December 31, 2014 to 2,598 billion cubic feet at December 31, 2015.

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**PETRÓLEOS MEXICANOS, PRODUCTIVE STATE-OWNED SUBSIDIARIES  
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During 2015, the exploration activities in shallow waters included 120 million barrels of oil equivalent from six new fields located close to existing facilities of exploration through exploration assignments. PEMEX increased the exploration of shallow waters in order to incorporate proved reserves, which support the future fresh production in the short term.

The following three tables of crude oil and dry gas reserves set forth PEMEX's estimates of its proved reserves determined in accordance with Rule 4-10(a).

**Summary of Oil and Gas<sup>(1)</sup> Proved Reserves as of December 31, 2015  
Based on Average Fiscal Year Prices**

	Crude oil and Condensates <sup>(2)</sup> (in millions of barrels)	Dry Gas <sup>(3)</sup> (in billions of cubic feet)
<b>Proved developed and undeveloped reserves:</b>		
Proved developed reserves	5,725	6,012
Proved undeveloped reserves	<u>2,252</u>	<u>2,598</u>
<b>Total proved reserves</b>	<u><u>7,977</u></u>	<u><u>8,610</u></u>

Note: Numbers may not total due to rounding.

(1) PEMEX does not currently produce synthetic oil or synthetic gas, or other natural resources from which synthetic oil or synthetic gas can be produced.

(2) Crude oil and condensate reserves include the fraction of liquefiable hydrocarbons recoverable in natural gas processing plants located at fields.

(3) Reserve volumes reported in this table are volumes of dry gas, although natural gas production reported in other tables refers to sour wet gas. There is a shrinkage in volume when natural gas liquids and impurities are extracted to obtain dry gas. Therefore, reported natural gas volumes are greater than dry gas volumes.

Source: Pemex Exploration and Production.

**Crude Oil and Condensate Reserves  
(including natural gas liquids)<sup>(1)</sup>**

	2015	2014	2013
	(in millions of barrels)		
<b>Proved developed and undeveloped reserves:</b>			
At January 1	10,292	11,079	11,424
Revisions <sup>(2)</sup>	(1,491)	95	630
Extensions and discoveries	111	119	62
Production	(935)	(1,001)	(1,037)
At December 31	<u>7,977</u>	<u>10,292</u>	<u>11,079</u>
<b>Proved developed reserves at December 31</b>	5,725	7,141	7,360
<b>Proved undeveloped reserves at December 31</b>	2,252	3,151	3,719

Note: Numbers may not total due to rounding.

(1) Crude oil and condensate reserves include the fraction of liquefiable hydrocarbons recoverable in natural gas processing plants located at fields.

(2) Revisions include positive and negative changes due to new data from well drilling, and revisions made when actual reservoir performance differs from expected performance and changes to hydrocarbon prices.

Source: Pemex Exploration and Production.

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**Dry gas reserves**

	<u>2015</u>	<u>2014</u>	<u>2013</u>
	<u>(in billions of cubic feet)</u>		
<b>Proved developed and undeveloped reserves:</b>			
At January 1	10,859	12,273	12,713
Revisions <sup>(1)</sup>	(955)	4	1,010
Extensions and discoveries	47	93	89
Production <sup>(2)</sup>	<u>(1,341)</u>	<u>(1,511)</u>	<u>(1,539)</u>
At December 31	<u>8,610</u>	<u>10,859</u>	<u>12,273</u>
<b>Proved developed reserves at December 31</b>	<u>6,012</u>	<u>6,740</u>	<u>7,461</u>
<b>Proved undeveloped reserves at December 31</b>	<u>2,598</u>	<u>4,119</u>	<u>4,811</u>

Note: Numbers may not total due to rounding.

- (1) Revisions include positive and negative changes due to new data from well drilling, and revisions made when actual reservoir performance differs from expected performance and change effects by hydrocarbon prices.
- (2) Production refers here to dry gas, although natural gas production reported in other tables refers to sour wet gas. There is a shrinkage in volume when natural gas liquids and impurities are extracted to obtain dry gas. Therefore, reported natural gas volumes are greater than dry gas volumes.

Source: Pemex Exploration and Production.

Pemex Exploration and Production's reserve-replacement ratio, or RRR, for a given period is calculated by dividing the sum of proved reserves, which is the sum of reserves obtained from discoveries, developments, delineations and revisions, by that period's total production. During 2015, 120 million barrels of oil equivalent of proved reserves were obtained from newly discovered wells, which was not enough to compensate for the reduction in reserves due to the revision, delimitation, development and production during 2015. Accordingly, there was no restitution of proved reserves during 2015. During 2014, the reserve-replacement ratio was 18.0%.

PEMEX's reserves production ratio, which is presented in terms of years, is calculated by dividing the estimated remaining reserves at the end of the relevant year by the total production of hydrocarbons for that year. As of December 31, 2015, this ratio was equal to 8.1 years for proved reserves in oil equivalent, which represents a decrease of 15.6% as compared to the 2014 reserves production ratio of 9.6 years for proved reserves.

***f. Standardized measure of discounted future net cash flows related to proved oil and gas reserves (unaudited)***

The standardized measure tables presented below relate to proved oil and gas reserves excluding proved reserves scheduled to be produced after the year 2041. This measure is presented in accordance with ASC Topic 932.

Estimated future cash inflows from production are computed by applying average prices of oil and gas of the first day of each month of 2015. Future development and production costs are those estimated future expenditures needed to develop and produce the year-end estimated proved reserves after a net cash flows discount factor of 10%, assuming constant year-end economic conditions.

Future tax expenses are computed by applying the appropriate year-end statutory tax rates with consideration of the tax rates of the new fiscal regime for Pemex Exploration and Production already legislated for 2015 to the future pre-tax net cash flows related to PEMEX's proved oil and gas reserves.

The estimated future payment of taxes was calculated based on fiscal regime applicable by decree to Pemex Exploration and Production effective January 1, 2015 and the decree tax benefits published in the Official Gazette of the Federation on April 18, 2016.

The standardized measure provided below represents a comparative benchmark value rather than an estimate of expected future cash flows or fair market value of PEMEX's production rights. There are numerous uncertainties inherent in estimating quantities of proved reserves and in projecting future rates of production and timing of development expenditures, including many factors beyond the control of the producer. Accordingly, reserve estimates may be materially different from the quantities of crude oil and natural gas that are ultimately recovered.

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**Standardized measure of discounted future net cash flows as of December 31,**

	<u>2015</u>	<u>2014</u> (in millions of dollars)	<u>2013</u>
Future cash inflows	U.S. \$ 325,052	U.S. \$ 757,794	U.S. \$ 931,874
Future production costs (excluding income taxes)	(99,948)	(112,421)	(135,211)
Future development costs	<u>(32,560)</u>	<u>(37,019)</u>	<u>(46,339)</u>
Future cash flows before tax	192,544	608,353	750,324
Future production and excess gains taxes	<u>(167,056)</u>	<u>(543,743)</u>	<u>(634,371)</u>
Future net cash flows	25,488	64,610	115,953
Effect of discounting net cash flows by 10%	(9,946)	(19,949)	(34,996)
<b>Standardized measure of discounted future net cash flows</b>	<u><u>U.S. \$ 15,541</u></u>	<u><u>U.S. \$ 44,661</u></u>	<u><u>U.S. \$ 80,957</u></u>

Note: Table amounts may not total due to rounding.

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To comply with ASC Topic 932, the following table presents the aggregate standardized measure changes for each of the last three years and significant sources of variance:

**Changes in standardized measure of discounted future net cash flows**

	<u>2015</u>	<u>2014</u> (in millions of dollars)	<u>2013</u>
Sales of oil and gas produced, net of production costs	U.S. \$ (28,371)	U.S. \$(69,582)	U.S. \$(82,802)
Net changes in prices and production costs	(327,865)	(79,617)	(61,268)
Extensions and discoveries	3,086	3,022	4,280
Development cost incurred during the year	10,172	14,215	14,224
Changes in estimated de- velopment costs	(2,171)	(7,086)	(12,625)
Reserves revisions and timing changes	(22,801)	(13,432)	49,091
Accretion of discount of pre- tax net cash flows	43,394	51,504	54,280
Net changes in production and excess gains taxes	295,437	64,678	18,253
Aggregate change in standardized measure of discounted future net cash flows	<u>U.S. \$ (29,119)</u>	<u>U.S. \$(36,296)</u>	<u>U.S. \$(16,567)</u>
Standardized measure:			
As of January 1	U.S. \$ 44,661	U.S. \$ 80,957	U.S. \$ 97,524
As of December 31	15,541	44,661	80,957
Change	<u>U.S. \$ (29,119)</u>	<u>U.S. \$(36,296)</u>	<u>U.S. \$(16,567)</u>

Note: Table amounts may not total due to rounding.

In computing the amounts under each factor of change, the effects of variances in prices and costs are computed before the effects of changes in quantities. Consequently, changes in reserves are calculated at December 31 prices and costs. The change in computed taxes includes taxes effectively incurred during the year and the change in future tax expense.

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EX-7.1 2 d179072dex71.htm EX-7.1

## Exhibit 7.1

**PETRÓLEOS MEXICANOS, SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES****Computation of ratio of earnings to fixed charges****(In thousands of Mexican pesos)**

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
<b>IFRS</b>					
Fixed Charges:					
Interest capitalized in fixed assets	5,258,854	3,997,121	2,943,597	2,110,075	4,292,351
Interest expense	99,271,197	73,657,618	54,067,022	72,951,202	63,003,854
Amortization premiums related to indebtedness	(2,229,657)	312,296	(1,890,710)	1,560,478	762,387
Estimate of the interest within rental expense	450,760	242,436	159,380	214,041	212,497
<b>Total Fixed Charges</b>	<b><u>102,681,154</u></b>	<b><u>78,209,471</u></b>	<b><u>55,279,289</u></b>	<b><u>76,835,796</u></b>	<b><u>68,271,089</u></b>
Net income (loss)	(712,567,398)	(265,542,989)	(170,058,427)	2,600,478	(106,942,256)
Hydrocarbon Income Tax (IRP)	—	(18,735,301)	3,787,543	2,392,919	(677,392)
Income Tax and Others	(45,587,267)	3,773,966	3,672,466	2,138,856	3,853,408
Cumulative effect of adoption of new accounting standards	—	—	—	—	—
Profit sharing in subsidiaries and affiliates (income from equity investees)	(2,318,115)	(34,368)	(706,710)	(4,797,607)	810,752
<b>Pretax income from continuing operations before income from equity investees</b>	<b><u>(760,472,780)</u></b>	<b><u>(280,538,692)</u></b>	<b><u>(163,305,128)</u></b>	<b><u>2,334,646</u></b>	<b><u>(102,955,488)</u></b>
Fixed Charges:	102,681,154	78,209,471	55,279,289	76,835,796	68,271,089
Amortization of interest capitalized	210,354	159,885	117,744	84,403	171,694
Distributed income of investments shares	359,941	736,302	914,116	685,704	599,907
Interest capitalized in fixed assets	(5,258,854)	(3,997,121)	(2,943,597)	(2,110,075)	(4,292,351)
<b>Earnings</b>	<b><u>(662,480,185)</u></b>	<b><u>(205,430,155)</u></b>	<b><u>(109,937,576)</u></b>	<b><u>77,830,474</u></b>	<b><u>(38,205,149)</u></b>
<b>Amount by which fixed charges exceed earnings</b>	765,161,339	283,639,626	165,216,865	—	106,476,238
Ratio of earnings to fixed charges	—	—	—	1.01	—





**RYDER SCOTT COMPANY**  
**PETROLEUM CONSULTANTS**  
TBPE REGISTERED ENGINEERING FIRM F-1580  
1100 LOUISIANA SUITE 4600

HOUSTON, TEXAS 77002-5294

FAX (713) 651-0849  
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EXHIBIT 10.1  
Part 1 of 2

April 29, 2016

Mtro. José Antonio González Anaya  
Petróleos Mexicanos  
Avenida Marina Nacional No. 329  
Torre Ejecutiva, Piso 44  
Colonia Verónica Anzures  
11300 Ciudad de México, México

Dear Dr. González Anaya,

We hereby consent to the references to Ryder Scott Company, L.P. as set forth under the heading “Exploration and Production (Reserves)” in the annual report on Form 20-F of Petróleos Mexicanos (“Pemex”) for the year ended December 31, 2015 (the “Form 20-F”) and to the filing as an exhibit to the Form 20-F our report, dated April 21, 2016, describing our review of the estimates of Pemex’s proved oil condensate, natural gas and oil equivalent reserves as of December 31, 2015, for 36 fields located offshore from Mexico in the Northeastern Marine Region and Southwestern Marine Region. These estimates were prepared in accordance with the applicable reserves definitions of Rule 4-10(a) of Regulation S-X of the United States Securities and Exchange Commission

*Ryder Scott Company, L.P.*

RYDER SCOTT COMPANY, L.P.  
TBPE License No. F-1580

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EXHIBIT 10.1  
Part 2 of 2

C-0030, Pemex Form 20-F (Dec. 31, 2015)

April 29, 2016

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Petróleos Mexicanos  
Avenida Marina Nacional No. 329  
Torre Ejecutiva, Piso 44  
Colonia Verónica Anzures  
11300 Ciudad de México, México

Dear Dr. González Anaya,

We hereby consent to the references to Ryder Scott Company, L.P. as set forth under the heading “Exploration and Production (Reserves)” in the annual report on Form 20-F of Petróleos Mexicanos (“Pemex”) for the year ended December 31, 2015 (the “Form 20-F”) and to the filing as an exhibit to the Form 20-F our report, dated April 21, 2016, describing our review of the estimates of Pemex’s proved oil condensate, natural gas and oil equivalent reserves as of December 31, 2015, for 104 fields located onshore in Mexico in the Southern Region. These estimates were prepared in accordance with the applicable reserves definitions of Rule 4-10(a) of Regulation S-X of the United States Securities and Exchange Commission



RYDER SCOTT COMPANY, L.P.  
TBPE License No. F-1580

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Pemex Exploración y Producción

Estimated  
Future Reserves  
Attributable to Certain Offshore  
Oil and Gas Properties in Mexico

Activo Abkatun-Pol-Chuc  
Activo Cantarell  
Activo Ku-Maloob-Zaap

SEC Parameters

As of  
December 31, 2015



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Guale Ramirez, P.E.  
TBPE License No.48318  
Executive Vice President

RYDER SCOTT COMPANY, L.P.  
TBPE Firm Registration No. F-1580



RYDER SCOTT COMPANY PETROLEUM CONSULTANTS



**RYDER SCOTT COMPANY**  
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April 29, 2016

Ing. J. Javier Hinojosa Puebla  
Director Ejecutivo  
Pemex-Exploración y Producción  
Avenida Marina Nacional 329 C-3  
Torre Ejecutiva, Piso 41  
Col. Verónica Anzúres, C.P. 11300  
Del. Miguel Hidalgo, Ciudad de México

Dear Ing. Hinojosa Puebla,

At the request of Pemex Exploración y Producción (PEP), a wholly owned subsidiary of Petróleos Mexicanos (Pemex), Ryder Scott Company, L.P. (Ryder Scott) has conducted a reserves audit of the estimates of the proved reserves owned by the United Mexican States as of December 31, 2015. In most cases the properties reviewed by us are operated by Pemex; however, certain contract areas are operated by other companies. The estimates we audited were prepared by PEP's engineering and geological staff based on the definitions and disclosure guidelines of the United States Securities and Exchange Commission contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009, in the Federal Register (SEC regulations). Our third party reserves audit, completed on February 26, 2016, and presented herein, was prepared for public disclosure by Pemex in filings made with the SEC in accordance with the disclosure requirements set forth in the SEC regulations. The properties reviewed by Ryder Scott are comprised of those properties contractually awarded to PEP and located in seven areas of operations known as Activos. The names of these Activos as well as their geographical locations are shown below:

Activo Abkatun-Pol-Chuc	Offshore Mexican territorial waters, Gulf of Mexico
Activo Cantarell	Offshore Mexican territorial waters, Gulf of Mexico
Activo Ku-Maloob-Zaap	Offshore Mexican territorial waters, Gulf of Mexico

The proved net reserves attributable to the properties that we reviewed account for 100 percent of the total proved net oil equivalent barrels (BOE) of PEP for the Activos listed above.

As prescribed by the Society of Petroleum Engineers in Paragraph 2.2(f) of the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (SPE auditing standards), a reserves audit is defined as "the process of reviewing certain of the pertinent facts interpreted and assumptions made that have resulted in an estimate of reserves prepared by others and the rendering of an opinion about (1) the appropriateness of the methodologies employed; (2) the adequacy and quality of the data relied upon; (3) the depth and thoroughness of the reserves estimation process; (4) the classification of reserves appropriate to the relevant definitions used; and (5) the reasonableness of the estimated reserve quantities."

Based on our review, including the data, technical processes and interpretations presented by PEP, it is our opinion that the overall procedures and methodologies utilized by PEP in preparing their estimates of the proved reserves as of December 31,

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2015 comply with the current SEC regulations, and that the overall proved reserves for the reviewed properties as estimated by PEP are, in the aggregate, reasonable within the established audit tolerance guidelines of 10 percent set forth in the SPE auditing standards.

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The estimated reserves presented in this report are related to hydrocarbon prices. PEP has informed us that in the preparation of their reserve and income projections, as of December 31, 2015, they used average prices during the 12-month period prior to the “as of date” of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements, as required by the SEC regulations. Actual future prices may vary significantly from the prices required by SEC regulations; therefore, volumes of reserves actually recovered may differ significantly from the estimated quantities presented in this report. The net reserves as estimated by PEP attributable to the properties that we reviewed are summarized as follows:

SEC PARAMETERS  
Estimated Net Reserves  
Attributable to Certain Properties  
Abkatun-Pol-Chuc, Cantarell, and Ku-Maloob-Zaap  
As of December 31, 2015

	Proved			Total Proved
	Developed		Undeveloped	
	Producing	Non-Producing		
<b>Net Reserves of Properties</b>				
<b><u>Audited by Ryder Scott</u></b>				
Oil/Condensate – MM Barrels	2,673.0	1,025.8	875.0	4,573.8
Plant Products(1) – MM Barrels	123.4	39.2	33.2	195.8
Dry Gas(2) – MM Barrels Equivalent	250.6	80.1	65.0	395.7
BOE(3) – MM Barrels	3,047.1	1,145.1	973.1	5,165.3
Gross Gas(4) – MMMCF	2,019.0	688.3	554.1	3,261.4

- (1) Includes liquids generated through the transportation process and at the petrochemical plants.
- (2) Dry Gas reserves are the dry, sweetened gas available for sale by Pemex - Gas y Petroquímica Básica at the tailgate of the processing plants.
- (3) Barrels of oil-equivalent are based on dry gas conversion factors provided by PEP.
- (4) Gross Gas represents produced volumes of gas before any losses for fuel use, venting, transporting or plant shrinkage.

Liquid hydrocarbons are expressed in standard 42 gallon barrels and are shown in millions of barrels (MM Barrels). All gas volumes are reported on an “as-sold” basis expressed in billions of cubic feet (MMMCF) at the official temperature and pressure bases of the areas in which the gas reserves are located. The net remaining reserves are also shown herein on an equivalent unit (BOE) basis wherein natural gas is converted to oil equivalent barrels using a factor of 5,200.9 cubic feet of natural gas per one barrel of oil equivalent. MMBOE represents million barrels of oil equivalent.

Based on our estimates of developed and undeveloped reserves, we calculate that, on a BOE basis, the developed reserves are 67% and the undeveloped reserves are 33% of the total reserves.

Reserves Included in This Report

In our opinion, the proved reserves reviewed by us and presented in this report conform to the definition as set forth in the Securities and Exchange Commission’s Regulations Part 210.4-10(a). An abridged version of the SEC reserves definitions from 210.4-10(a) entitled “Petroleum Reserves Definitions” is included as an attachment to this report.

The various proved reserve status categories are defined under the attachment entitled “Petroleum Reserves Status Definitions and Guidelines” in this report. The proved developed non-producing reserves included herein consist of the shut-in and behind pipe categories.

Reserves are “estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.” All reserve estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal categories, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-categorized as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. At PEP’s request, this report addresses only the proved reserves attributable to the properties reviewed herein.

Proved oil and gas reserves are those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward.” The proved reserves included herein were estimated using deterministic methods. If deterministic methods are used, the SEC has defined reasonable certainty for proved reserves as a “high degree of confidence that the quantities will be recovered.”

Proved reserve estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change. For proved reserves, the SEC states that “as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to the estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.” Moreover, estimates of proved reserves may be revised as a result of future operations, effects of regulation by governmental agencies or geopolitical or economic risks. Therefore, the proved reserves included in this report are estimates only and should not be construed as being exact quantities, and if recovered, could be more or less than the estimated amounts.

**Audit Data, Methodology, Procedure and Assumptions**

The estimation of reserves involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil and gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities in accordance with the definitions set forth by the Securities and Exchange Commission’s Regulations Part 210.4-10(a). The process of estimating the quantities of recoverable oil and gas reserves relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods: (1) performance-based methods; (2) volumetric-based methods; and (3) analogy. These methods may be used individually or in combination by the reserve evaluator in the process of estimating the quantities of reserves. Reserve evaluators must select the method or combination of methods which in their professional judgment is most appropriate given the nature and amount of reliable geoscience and engineering data available at the time of the estimate, the established or anticipated performance characteristics of the reservoir being evaluated and the stage of development or producing maturity of the property.

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In many cases, the analysis of the available geoscience and engineering data and the subsequent interpretation of this data may indicate a range of possible outcomes in an estimate, irrespective of the method selected by the evaluator. When a range in the quantity of reserves is identified, the evaluator must determine the uncertainty associated with the incremental quantities of the reserves. If the reserve quantities are estimated using the deterministic incremental approach, the uncertainty for each discrete incremental quantity of the reserves is addressed by the reserve category assigned by the evaluator. Therefore, it is the categorization of reserve quantities as proved, probable and/or possible that addresses the inherent uncertainty in the estimated quantities reported. For proved reserves, uncertainty is defined by the SEC as reasonable certainty wherein the “quantities actually recovered are much more likely than not to be achieved.” The SEC states that “probable reserves are those additional reserves that

are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.” The SEC states that “possible reserves are those additional reserves that are less certain to be recovered than probable reserves and the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves.” All quantities of reserves within the same reserve category must meet the SEC definitions as noted above.

Estimates of reserves quantities and their associated reserve categories may be revised in the future as additional geoscience or engineering data become available. Furthermore, estimates of reserves quantities and their associated reserve categories may also be revised due to other factors such as changes in economic conditions, results of future operations, effects of regulation by governmental agencies or geopolitical or economic risks as previously noted herein.

The proved reserves prepared by PEP for the properties that we reviewed were estimated by performance methods, the volumetric method, analogy, or a combination of methods. Approximately 41 percent of the proved producing reserves attributable to producing wells and/or reservoirs that we reviewed were estimated by performance methods. These performance methods include, but may not be limited to, decline curve analysis, numerical simulation and material balance, which utilized extrapolations of historical production and pressure data available through December 2015, in those cases where such data were considered to be definitive. The data utilized in these analyses were furnished to Ryder Scott by PEP and were considered sufficient for the purpose thereof. The remaining 59 percent of the proved producing reserves that we reviewed were estimated by the volumetric method, analogy, or a combination of methods. These methods were used where there were inadequate historical performance data to establish a definitive trend and where the use of production performance data as a basis for the reserve estimates was considered to be inappropriate.

All of the proved developed non-producing and undeveloped reserves that we reviewed were estimated by the volumetric method, analogy, or a combination of methods. Volume versus depth analytical volumetric models that considered historical production volumes as well as movements of oil-water and gas-oil contacts with time were also utilized for certain major properties located offshore. The volumetric analysis utilized pertinent well and seismic data furnished to Ryder Scott by PEP for our review that were available through December 2015. The data utilized from the analogues in conjunction with well and seismic data incorporated into the volumetric analysis were considered sufficient for the purpose thereof.

To estimate economically recoverable proved oil and gas reserves many factors and assumptions are considered including, but not limited to, the use of reservoir parameters derived from geological, geophysical and engineering data which cannot be measured directly, economic criteria based on current costs and SEC pricing requirements, and forecasts of future production rates. Under the SEC regulations 210.4-10(a)(22)(v) and (26), proved reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the

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prices and costs at which economic producibility from a reservoir is to be determined. While it may reasonably be anticipated that the future prices received for the sale of production and the operating costs and other costs relating to such production may increase or decrease from those under existing economic conditions, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in conducting this review.

As stated previously, proved reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the prices and costs at which economic producibility from a reservoir is to be determined. To confirm that the proved reserves reviewed by us meet the SEC requirements to be economically producible, we have reviewed certain primary economic data utilized by PEP relating to hydrocarbon prices and costs as noted herein.

The hydrocarbon prices furnished by PEP for the properties reviewed by us are based on SEC price parameters using the average prices during the 12-month period prior to the “as of date” of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements. For hydrocarbon products sold under contract, the contract prices, including fixed and determinable escalations exclusive of inflation adjustments, were used until expiration of the contract. Upon contract expiration, the prices were adjusted to the 12-month unweighted arithmetic average as previously described.

The initial SEC hydrocarbon prices in effect on December 31, 2015 for the properties reviewed by us were determined using the 12-month average first-day-of-the-month prices appropriate to the geographic areas where the hydrocarbons are sold.

These prices are the actual prices received by PEP for the sale of hydrocarbon products to its affiliates such as Pemex - Refinación.

The table below summarizes PEP's net volume weighted prices adjusted for differentials for the properties reviewed by us by geographic areas and referred to herein as PEP's "average realized prices." The average realized prices shown in the table below were determined from PEP's estimate of the total future gross revenue before production taxes for the properties reviewed by us and PEP's estimate of the total net reserves for the properties reviewed by us for each of the areas referred to as Activos in the Northern Region. The data shown in the table below is presented in accordance with SEC disclosure requirements for each of the geographic areas within the Northern Region reviewed by us.

Geographic Area (Activo)	Product	Average Realized Prices
Abkatun-Pol-Chuc	Oil/Condensate	\$53.57/Bbl
	Gas	\$4.47/MCF
	Gas	\$3.97/MCF
Cantarell	Oil/Condensate	\$47.00/Bbl
	Gas	\$3.73/MCF
Ku-Maloob-Zaap	Oil/Condensate	\$40.82/Bbl
	Gas	\$4.29/MCF

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The effects of derivative instruments designated as price hedges of oil and gas quantities are not reflected in PEP's individual property evaluations.

Accumulated gas production imbalances, if any, were not taken into account in the proved gas reserve estimates reviewed. The proved gas volumes included herein do not attribute gas consumed in operations as reserves.

Operating costs furnished by PEP are based on the operating expense reports of PEP and include only those costs directly applicable to the fields or wells for the properties reviewed by us. The operating costs include a portion of general and administrative costs allocated directly to the fields and wells. The operating costs furnished by PEP were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by PEP. No deduction was made for loan repayments, interest expenses, or exploration and development prepayments that were not charged directly to the fields, wells or contract areas.

Development costs furnished by PEP are based on authorizations for expenditure for the proposed work or actual costs for similar projects. The development costs furnished by PEP were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by PEP. At PEP's request, abandonment costs were not considered in our economic evaluation.

The proved developed non-producing and undeveloped reserves for the operated and non-operated properties reviewed by us have been incorporated herein in accordance with PEP's and the other operator's plans to develop these reserves as of December 31, 2015. The implementation of these development plans as presented to us is subject to the approval process adopted by PEP's management. As the result of our inquiries during the course of our review, PEP has informed us that the development activities for the properties reviewed by us have been subjected to and received the internal approvals required by PEP's management at the appropriate local, regional and/or corporate level. PEP has also informed us that the same type of approval process has been conducted by the other operators for those properties that such companies operate. Additionally, PEP has informed us that they are not aware of any legal, regulatory or political obstacles that would significantly alter their plans. While these plans could change from those under existing economic conditions as of December 31, 2015, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in making this evaluation.

Current costs used by PEP were held constant throughout the life of the properties.



PEP's forecasts of future production rates are based on historical performance from wells currently on production. If no production decline trend has been established, future production rates were held constant until a decline in ability to produce was anticipated. An estimated rate of decline was then applied to depletion of the reserves. If a decline trend has been established, this trend was used as the basis for estimating future production rates.

Test data and other related information were used by PEP to estimate the anticipated initial production rates for those wells or locations that are not currently producing. For reserves not yet on production, sales were estimated to commence at an anticipated date furnished by PEP. Wells or locations that are not currently producing may start producing earlier or later than anticipated in PEP's estimates due to unforeseen factors causing a change in the timing to initiate production. Such factors may include delays due to weather, the availability of rigs, the sequence of drilling, completing and/or recompleting wells and/or constraints set by regulatory bodies.

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The future production rates from wells currently on production or wells or locations that are not currently producing may be more or less than estimated because of changes including, but not limited to, reservoir performance, operating conditions related to surface facilities, compression and artificial lift, pipeline capacity and/or operating conditions, producing market demand and/or allowables or other constraints set by regulatory bodies.

Ryder Scott did not evaluate the country and geopolitical risks in the country of Mexico where all of the subject properties are located. PEP's operations and the operations of the other companies may be subject to various levels of governmental controls and regulations. These controls and regulations may include, but may not be limited to, matters relating to land tenure and use, drilling and production practices, environmental protection, marketing and pricing policies, various taxes and levies and are subject to change from time to time.

The Political Constitution of the United Mexican States provides that the Mexican nation, not Pemex or the other operators owns all petroleum and other hydrocarbon reserves located in Mexico. Although Mexican law has previously given Pemex the exclusive right to exploit Mexico's hydrocarbon reserves either as operator or under agreements with other operators, certain new laws were enacted in December 2013 that in the future will permit foreign companies to operate under other types of contracts that would potentially enable such companies to book their own reserves. It is expected that such laws will result in the participation of foreign companies in the upstream exploitation of certain oil and gas properties, which as of December 31, 2015 were under the operatorship of PEP and which reserves are included in this report. Such changes as well as potential changes to the contractual terms of the areas that are currently operated by others and also included in this report could cause volumes of proved reserves actually recovered and amounts of proved income actually received to differ significantly from the estimated quantities presented herein.

The estimates of proved reserves presented herein were based upon a review of the subject properties; however, we have not made any field examination of the properties. No consideration was given in this report to potential environmental liabilities that may exist nor were any costs included by PEP for potential liabilities to restore and clean up damages, if any, caused by past operating practices.

Certain technical personnel of PEP are responsible for the preparation of reserve estimates on new properties and for the preparation of revised estimates, when necessary, on old properties. These personnel assembled the necessary data and maintained the data and workpapers in an orderly manner. We consulted with these technical personnel and had access to their workpapers and supporting data in the course of our audit.

PEP has informed us that for both the operated and non-operated properties they have furnished us all of the material accounts, records, geological and engineering data, and reports and other data required for this investigation. In performing our audit of PEP's forecast of future proved production, we have relied upon data furnished by PEP with respect to property interests, production and well tests from examined wells, normal direct costs of operating the properties, other costs such as transportation and/or processing fees, recompletion and development costs, development plans, product prices based on the SEC regulations, adjustments or differentials to product prices, geological structural and isochore maps, well logs, core analyses, and pressure measurements. For non-operated properties, the costs provided by Pemex include all charges related to the expense of such contractual obligations. Ryder Scott reviewed such factual data for its reasonableness; however, we have not conducted an independent verification of the data furnished by PEP. The data described herein were accepted as authentic and sufficient for determining the reserves unless, during the course of our examination, a matter of question came to our attention in which case the

data were not accepted until all questions were satisfactorily resolved. We consider the factual data furnished to us by PEP to be

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appropriate and sufficient for the purpose of our review of PEP’s estimates of reserves. In summary, we consider the assumptions, data, methods and analytical procedures used by PEP and as reviewed by us appropriate for the purpose hereof, and we have used all such methods and procedures that we consider necessary and appropriate under the circumstances to render the conclusions set forth herein.

**Audit Opinion**

Based on our review, including the data, technical processes and interpretations presented by PEP, it is our opinion that the overall procedures and methodologies utilized by PEP in preparing their estimates of the proved reserves as of December 31, 2015 comply with the current SEC regulations and that the overall proved reserves in terms of barrels of oil equivalent (BOE) for the reviewed properties as estimated by PEP are, in the aggregate, reasonable within the established audit tolerance guidelines of 10 percent as set forth in the SPE auditing standards.

We were in reasonable agreement with PEP’s estimates of proved reserves for the properties which we reviewed; however, in certain cases there was more than an acceptable variance between PEP’s estimates and our estimates due to a difference in interpretation of data or due to our having access to data which were not available to PEP when its reserve estimates were prepared. In these cases, PEP revised its estimates to better conform to our estimates. As a consequence, it is our opinion that on an aggregate basis the data presented herein for the properties that we reviewed fairly reflects the estimated net reserves for those properties, both operated and non-operated, and owned by the United Mexican States.

The same technical personnel of PEP were responsible for the preparation of the reserve estimates for the properties that we reviewed as well as for the properties not reviewed by Ryder Scott.

**Standards of Independence and Professional Qualification**

Ryder Scott is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1937. Ryder Scott is employee-owned and maintains offices in Houston, Texas; Denver, Colorado; and Calgary, Alberta, Canada. We have over eighty engineers and geoscientists on our permanent staff. By virtue of the size of our firm and the large number of clients for which we provide services, no single client or job represents a material portion of our annual revenue. We do not serve as officers or directors of any privately-owned or publicly-traded oil and gas company and are separate and independent from the operating and investment decision-making process of our clients. This allows us to bring the highest level of independence and objectivity to each engagement for our services.

Ryder Scott actively participates in industry-related professional societies and organizes an annual public forum focused on the subject of reserves evaluations and SEC regulations. Many of our staff have authored or co-authored technical papers on the subject of reserves related topics. We encourage our staff to maintain and enhance their professional skills by actively participating in ongoing continuing education.

Prior to becoming an officer of the Company, Ryder Scott requires that staff engineers and geoscientists have received professional accreditation in the form of a registered or certified professional engineer’s license or a registered or certified professional geoscientist’s license, or the equivalent thereof, from an appropriate governmental authority or a recognized self-regulating professional organization.

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We are independent petroleum engineers with respect to PEP. Neither we nor any of our employees have any financial interest in the subject properties, and neither the employment to do this work nor the compensation is contingent on our estimates of reserves for the properties which were reviewed.

The results of this audit, presented herein, are based on technical analysis conducted by teams of geoscientists and engineers from Ryder Scott. The professional qualifications of the undersigned, the technical person primarily responsible for the review of the reserves information discussed in this report, are included as an attachment to this letter.

**Terms of Usage**

The results of our third party audit, presented in report form herein, were prepared in accordance with the disclosure requirements set forth in the SEC regulations and intended for public disclosure as an exhibit in filings made with the SEC by Pemex.

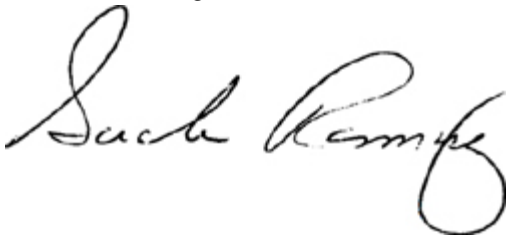
Pemex makes periodic filings on Form 20-F with the SEC under the 1934 Exchange Act. Furthermore, Pemex files registration statements with the SEC under the 1933 Securities Act into which filings on Form 20-F are incorporated by reference. We have consented to the references to our name in and the filing of this report as an exhibit to the annual report on Form 20-F of Pemex for the year ended December 31, 2015. Our written consent for such use will be included as a separate exhibit to such Form 20-F. In the event the references to our name as well as references to our report are incorporated by reference into any registration statement on Form F-4, then our written consent for such use will be included as a separate exhibit to such registration statement.

We have provided PEP with a digital version of the original signed copy of this report letter. In the event there are any differences between the digital version included in filings made by Pemex and the original signed report letter, the original signed report letter shall control and supersede the digital version.

The data and workpapers used in the preparation of this report are available for examination by authorized parties in our offices. Please contact us if we can be of further service.

Very truly yours,

RYDER SCOTT COMPANY, L.P.  
TBPE Firm Registration No. F-1580



Guale Ramirez, P.E.  
TBPE License No. 48318  
Executive Vice President

GR (DPR)/pl



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Professional Qualifications of Primary Technical Person

The conclusions presented in this report are the result of technical analysis conducted by teams of geoscientists and engineers from Ryder Scott Company, L.P. Guadalupe Ramirez was the primary technical person responsible for overseeing the estimate of the reserves, future production and income.

Mr. Ramirez, an employee of Ryder Scott Company, L.P. (Ryder Scott) since 1981, is the Executive Vice President and also serves as a member of the Board of Directors. He is responsible for coordinating and supervising staff and consulting engineers of

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the company in ongoing reservoir evaluation studies worldwide. Before joining Ryder Scott, Mr. Ramirez served in a number of engineering positions with Sun Oil Company and Natomas North America. For more information regarding Mr. Ramirez's geographic and job specific experience, please refer to the Ryder Scott Company website at [www.ryderscott.com/Company/Employees](http://www.ryderscott.com/Company/Employees).

Mr. Ramirez earned a Bachelor of Science Degree in Mechanical Engineering with honors from Texas A&M University in 1976 and is a licensed Professional Engineer in the State of Texas. He is also a member of the Society of Petroleum Engineers and Society of Petroleum Evaluation Engineers.

In addition to gaining experience and competency through prior work experience, the Texas Board of Professional Engineers requires a minimum of fifteen hours of continuing education annually, including at least one hour in the area of professional ethics, which Mr. Ramirez fulfills. As part of his 2015 continuing education hours, Mr. Ramirez attended an internally received 14 hours of formalized training as well as a day-long public forum, the 2014 RSC Reserves Conference relating to the definitions and disclosure guidelines contained in the United States Securities and Exchange Commission Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009 in the Federal Register. Mr. Ramirez has also presented courses on the new SEC and SPE-PRMS reserves definitions on various occasions during 2011, 2012 and 2013 and received 36 hours of formalized external training during 2015, covering such topics as the Guidelines for Application of the SPE/WPC/AAPG/SPEE Petroleum Resources Management System, reservoir engineering, geoscience and petroleum economics evaluation methods, procedures and software, unconventional resources and ethics for consultants.

Based on his educational background, professional training and more than 35 years of practical experience in the estimation and evaluation of petroleum reserves, Mr. Ramirez has attained the professional qualifications as a Reserves Estimator and Reserves Auditor set forth in Article III of the "Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information" promulgated by the Society of Petroleum Engineers as of February 19, 2007.

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PETROLEUM RESERVES DEFINITIONS

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)

**PREAMBLE**

On January 14, 2009, the United States Securities and Exchange Commission (SEC) published the "Modernization of Oil and Gas Reporting; Final Rule" in the Federal Register of National Archives and Records Administration (NARA). The "Modernization of Oil and Gas Reporting; Final Rule" includes revisions and additions to the definition section in Rule 4-10 of Regulation S-X, revisions and additions to the oil and gas reporting requirements in Regulation S-K, and amends and codifies Industry Guide 2 in Regulation S-K. The "Modernization of Oil and Gas Reporting; Final Rule", including all references to Regulation S-X and Regulation S-K, shall be referred to herein collectively as the "SEC regulations". The SEC regulations take effect for all filings made with the United States Securities and Exchange Commission as of December 31, 2009, or after January 1, 2010. Reference should be made to the full text under Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) for the complete definitions (direct passages excerpted in part or wholly from the aforementioned SEC document are denoted in italics herein).

*Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.* All reserve estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-classified as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. Under the SEC regulations as of December 31, 2009, or after January 1, 2010, a company may optionally disclose estimated quantities of probable or possible oil and gas reserves in documents publicly filed with the SEC. The SEC regulations continue to prohibit disclosure of estimates of oil and gas resources other than reserves and any estimated values of such resources in any document publicly filed with the SEC unless such information is required to be disclosed in the document by foreign or state law as noted in §229.1202 Instruction to Item 1202.

Reserves estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change.

Reserves may be attributed to either natural energy or improved recovery methods. Improved recovery methods include all methods for supplementing natural energy or altering natural forces in the reservoir to increase ultimate recovery. Examples of such methods are pressure maintenance, natural gas cycling, waterflooding, thermal methods, chemical flooding, and the use of miscible and immiscible displacement fluids. Other improved recovery methods may be developed in the future as petroleum technology continues to evolve.

Reserves may be attributed to either conventional or unconventional petroleum accumulations. Petroleum accumulations are considered as either conventional or unconventional based on the nature of their in-place characteristics, extraction method applied, or degree of processing prior to sale.

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PETROLEUM RESERVES DEFINITIONS  
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Examples of unconventional petroleum accumulations include coalbed or coalseam methane (CBM/CSM), basin-centered gas, shale gas, gas hydrates, natural bitumen and oil shale deposits. These unconventional accumulations may require specialized extraction technology and/or significant processing prior to sale.

Reserves do not include quantities of petroleum being held in inventory.

Because of the differences in uncertainty, caution should be exercised when aggregating quantities of petroleum from different reserves categories.

RESERVES (SEC DEFINITIONS)

Securities and Exchange Commission Regulation S-X §210.4-10(a)(26) defines reserves as follows:

**Reserves.** *Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.*

Note to paragraph (a)(26): *Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (i.e., potentially recoverable resources from undiscovered accumulations).*

PROVED RESERVES (SEC DEFINITIONS)

Securities and Exchange Commission Regulation S-X §210.4-10(a)(22) defines proved oil and gas reserves as follows:

**Proved oil and gas reserves.** *Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.*

(i) *The area of the reservoir considered as proved includes:*

(A) *The area identified by drilling and limited by fluid contacts, if any, and*

(B) *Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous*

*with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.*

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PETROLEUM RESERVES DEFINITIONS  
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PROVED RESERVES (SEC DEFINITIONS) CONTINUED

*(ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.*

*(iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.*

*(iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:*

*(A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and*

*(B) The project has been approved for development by all necessary parties and entities, including governmental entities.*

*(v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.*

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PETROLEUM RESERVES STATUS DEFINITIONS AND GUIDELINES

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)

and

PETROLEUM RESOURCES MANAGEMENT SYSTEM (SPE-PRMS)  
Sponsored and Approved by:  
SOCIETY OF PETROLEUM ENGINEERS (SPE)  
WORLD PETROLEUM COUNCIL (WPC)  
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS (AAPG)  
SOCIETY OF PETROLEUM EVALUATION ENGINEERS (SPEE)

Reserves status categories define the development and producing status of wells and reservoirs. Reference should be made to Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) and the SPE-PRMS as the following reserves status definitions are based on excerpts from the original documents (direct passages excerpted from the aforementioned SEC and SPE-PRMS documents are denoted in italics herein).

DEVELOPED RESERVES (SEC DEFINITIONS)

Securities and Exchange Commission Regulation S-X §210.4-10(a)(6) defines developed oil and gas reserves as follows:

*Developed oil and gas reserves are reserves of any category that can be expected to be recovered:*

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and*
- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.*

Developed Producing (SPE-PRMS Definitions)

While not a requirement for disclosure under the SEC regulations, developed oil and gas reserves may be further sub-classified according to the guidance contained in the SPE-PRMS as Producing or Non-Producing.

**Developed Producing Reserves**

*Developed Producing Reserves are expected to be recovered from completion intervals that are open and producing at the time of the estimate.*

*Improved recovery reserves are considered producing only after the improved recovery project is in operation.*

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PETROLEUM RESERVES STATUS DEFINITIONS AND GUIDELINES

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**Developed Non-Producing**

*Developed Non-Producing Reserves include shut-in and behind-pipe reserves.*

**Shut-In**

*Shut-in Reserves are expected to be recovered from:*

- (1) completion intervals which are open at the time of the estimate, but which have not started producing;*
- (2) wells which were shut-in for market conditions or pipeline connections; or*
- (3) wells not capable of production for mechanical reasons.*

**Behind-Pipe**

*Behind-pipe Reserves are expected to be recovered from zones in existing wells, which will require additional completion work or future re-completion prior to start of production.*

*In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.*

UNDEVELOPED RESERVES (SEC DEFINITIONS)

Securities and Exchange Commission Regulation S-X §210.4-10(a)(31) defines undeveloped oil and gas reserves as follows:

*Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.*

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.*
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.*

*(iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.*

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Exhibit 10.2 (2 of 2)

Pemex Exploración y Producción

Estimated

Future Reserves

Attributable to Certain

Oil and Gas Properties in Mexico

Activo Bellota-Jujo

Activo Cinco Presidentes

Activo Macuspana-Muspac

Activo Samaria-Luna

SEC Parameters

As of

December 31, 2015



Guale Ramirez, P.E.  
TBPE License No. 48318  
Executive Vice President

RYDER SCOTT COMPANY, L.P.

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**



TBPE Firm Registration No. F-1580



RYDER SCOTT COMPANY PETROLEUM CONSULTANTS


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April 29, 2016

Ing. J. Javier Hinojosa Puebla  
 Director Ejecutivo  
 Pemex-Exploración y Producción  
 Avenida Marina Nacional 329 C-3  
 Torre Ejecutiva, Piso 41  
 Col. Verónica Anzúres, C.P. 11300  
 Del. Miguel Hidalgo, Ciudad de México

Dear Ing. Hinojosa Puebla,

At the request of Pemex Exploración y Producción (PEP), a wholly owned subsidiary of Petróleos Mexicanos (Pemex), Ryder Scott Company, L.P. (Ryder Scott) has conducted a reserves audit of the estimates of the proved reserves owned by the United Mexican States as of December 31, 2015. In most cases the properties reviewed by us are operated by Pemex; however, certain contract areas are operated by other companies. The estimates we audited were prepared by PEP's engineering and geological staff based on the definitions and disclosure guidelines of the United States Securities and Exchange Commission contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009, in the Federal Register (SEC regulations). Our third party reserves audit, completed on February 26, 2016, and presented herein, was prepared for public disclosure by Pemex in filings made with the SEC in accordance with the disclosure requirements set forth in the SEC regulations. The properties reviewed by Ryder Scott are comprised of those properties contractually awarded to PEP and located in four areas of operations known as Activos. The names of these Activos as well as their geographical locations are shown below:

Activo Bellota-Jujo	Onshore Mexican state of Tabasco
Activo Cinco Presidentes	Onshore Mexican states of Tabasco and Veracruz
Activo Macuspana-Muspac	Onshore Mexican states of Chiapas and Tabasco
Activo Samaria-Luna	Onshore Mexican state of Tabasco

The proved net reserves attributable to the properties that we reviewed account for 100 percent of the total proved net oil equivalent barrels (BOE) of PEP for the Activos listed above.

As prescribed by the Society of Petroleum Engineers in Paragraph 2.2(f) of the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (SPE auditing standards), a reserves audit is defined as "the process of reviewing certain of the pertinent facts interpreted and assumptions made that have resulted in an estimate of reserves prepared by others and the rendering of an opinion about (1) the appropriateness of the methodologies employed; (2) the adequacy and quality of the data relied upon; (3) the depth and thoroughness of the reserves estimation process; (4) the classification of reserves appropriate to the relevant definitions used; and (5) the reasonableness of the estimated reserve quantities."

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Based on our review, including the data, technical processes and interpretations presented by PEP, it is our opinion that the overall procedures and methodologies utilized by PEP in preparing their

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estimates of the proved reserves as of December 31, 2015 comply with the current SEC regulations, and that the overall proved reserves for the reviewed properties as estimated by PEP are, in the aggregate, reasonable within the established audit tolerance guidelines of 10 percent set forth in the SPE auditing standards.

The estimated reserves presented in this report are related to hydrocarbon prices. PEP has informed us that in the preparation of their reserve and income projections, as of December 31, 2015, they used average prices during the 12-month period prior to the “as of date” of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements, as required by the SEC regulations. Actual future prices may vary significantly from the prices required by SEC regulations; therefore, volumes of reserves actually recovered may differ significantly from the estimated quantities presented in this report. The net reserves as estimated by PEP attributable to the properties that we reviewed are summarized as follows:

SEC PARAMETERS  
Estimated Net Reserves  
Attributable to Certain Properties  
Bellota Jujo – Cinco Presidentes – Macuspana Muspac – Samaria Luna  
As of December 31, 2015

	Proved			Total Proved
	Developed		Undeveloped	
	Producing	Non-Producing		
<b><i>Net Reserves of Properties</i></b>				
<b><i>Audited by Ryder Scott</i></b>				
Oil/Condensate – MM Barrels	478.7	363.0	408.4	1,250.1
Plant Products(1) – MM Barrels	159.6	76.9	78.5	315.0
Dry Gas(2) – MM Barrels Equivalent	268.0	128.8	128.2	525.0
BOE(3) – MM Barrels	906.3	568.7	615.1	2,090.1
Gross Gas(4) – MMMCF	1,907.3	939.1	907.0	3,753.4

- (1) Includes liquids generated through the transportation process and at the petrochemical plants.
- (2) Dry Gas reserves are the dry, sweetened gas available for sale by Pemex - Gas y Petroquímica Básica at the tailgate of the processing plants.
- (3) Barrels of oil-equivalent are based on dry gas conversion factors provided by PEP.
- (4) Gross Gas represents produced volumes of gas before any losses for fuel use, venting, transporting or plant shrinkage.

Liquid hydrocarbons are expressed in standard 42 gallon barrels and are shown in millions of barrels (MM Barrels). All gas volumes are reported on an “as-sold” basis expressed in billions of cubic feet (MMMCF) at the official temperature and pressure bases of the areas in which the gas reserves are located. The net remaining reserves are also shown herein on an equivalent unit (BOE) basis wherein natural gas is converted to oil equivalent barrels using a factor of 5,200.9 cubic feet of natural gas per one barrel of oil equivalent. MMBOE represents million barrels of oil equivalent.

Reserves Included in This Report

In our opinion, the proved reserves reviewed by us and presented in this report conform to the definition as set forth in the Securities and Exchange Commission’s Regulations Part 210.4-10(a). An abridged version of the SEC reserves definitions from 210.4-10(a) entitled “Petroleum Reserves Definitions” is included as an attachment to this report.

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The various proved reserve status categories are defined under the attachment entitled “Petroleum Reserves Status Definitions and Guidelines” in this report. The proved developed non-producing reserves included herein consist of the shut-in and behind pipe categories.

Reserves are “estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.” All reserve estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal categories, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-categorized as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. At PEP’s request, this report addresses only the proved reserves attributable to the properties reviewed herein.

Proved oil and gas reserves are those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward.” The proved reserves included herein were estimated using deterministic methods. If deterministic methods are used, the SEC has defined reasonable certainty for proved reserves as a “high degree of confidence that the quantities will be recovered.”

Proved reserve estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change. For proved reserves, the SEC states that “as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to the estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.” Moreover, estimates of proved reserves may be revised as a result of future operations, effects of regulation by governmental agencies or geopolitical or economic risks. Therefore, the proved reserves included in this report are estimates only and should not be construed as being exact quantities, and if recovered, could be more or less than the estimated amounts.

**Audit Data, Methodology, Procedure and Assumptions**

The estimation of reserves involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil and gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities in accordance with the definitions set forth by the Securities and Exchange Commission’s Regulations Part 210.4-10(a). The process of estimating the quantities of recoverable oil and gas reserves relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods: (1) performance-based methods; (2) volumetric-based methods; and (3) analogy. These methods may be used individually or in combination by the reserve evaluator in the process of estimating the quantities of reserves. Reserve evaluators must select the method or combination of methods which in their professional judgment is most appropriate given the nature and amount of reliable geoscience and engineering data available at the time of the estimate, the established or anticipated performance characteristics of the reservoir being evaluated and the stage of development or producing maturity of the property.

In many cases, the analysis of the available geoscience and engineering data and the subsequent interpretation of this data may indicate a range of possible outcomes in an estimate, irrespective of the method selected by the evaluator. When a range in the quantity of reserves is

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identified, the evaluator must determine the uncertainty associated with the incremental quantities of the reserves. If the reserve quantities are estimated using the deterministic incremental approach, the uncertainty for each discrete incremental quantity of the reserves is addressed by the reserve category assigned by the evaluator. Therefore, it is the categorization of reserve quantities as proved, probable and/or possible that addresses the inherent uncertainty in the estimated quantities reported. For proved reserves, uncertainty is defined by the SEC as reasonable certainty wherein the “quantities actually recovered are much more likely than not to be achieved.” The SEC states that “probable reserves are those additional reserves that are less certain to be recovered than

proved reserves but which, together with proved reserves, are as likely as not to be recovered." The SEC states that "possible reserves are those additional reserves that are less certain to be recovered than probable reserves and the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves." All quantities of reserves within the same reserve category must meet the SEC definitions as noted above.

Estimates of reserves quantities and their associated reserve categories may be revised in the future as additional geoscience or engineering data become available. Furthermore, estimates of reserves quantities and their associated reserve categories may also be revised due to other factors such as changes in economic conditions, results of future operations, effects of regulation by governmental agencies or geopolitical or economic risks as previously noted herein.

The proved reserves prepared by PEP for the properties that we reviewed were estimated by performance methods, the volumetric method, analogy, or a combination of methods. Approximately 92 percent of the proved producing reserves attributable to producing wells and/or reservoirs that we reviewed were estimated by performance methods. These performance methods include, but may not be limited to, decline curve analysis, numerical simulation and material balance, which utilized extrapolations of historical production and pressure data available through December 2015, in those cases where such data were considered to be definitive. The data utilized in these analyses were furnished to Ryder Scott by PEP and were considered sufficient for the purpose thereof. The remaining 8 percent of the proved producing reserves that we reviewed were estimated by the volumetric method, analogy, or a combination of methods. These methods were used where there were inadequate historical performance data to establish a definitive trend and where the use of production performance data as a basis for the reserve estimates was considered to be inappropriate.

All of the proved developed non-producing and undeveloped reserves that we reviewed were estimated by the volumetric method, analogy, or a combination of methods. The volumetric analysis utilized pertinent well and seismic data furnished to Ryder Scott by PEP for our review that were available through December 2015. The data utilized from the analogues in conjunction with well and seismic data incorporated into the volumetric analysis were considered sufficient for the purpose thereof.

To estimate economically recoverable proved oil and gas reserves many factors and assumptions are considered including, but not limited to, the use of reservoir parameters derived from geological, geophysical and engineering data which cannot be measured directly, economic criteria based on current costs and SEC pricing requirements, and forecasts of future production rates. Under the SEC regulations 210.4-10(a)(22)(v) and (26), proved reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the prices and costs at which economic producibility from a reservoir is to be determined. While it may reasonably be anticipated that the future prices received for the sale of production and the operating costs and other costs relating to such production may increase or decrease from those under existing economic conditions, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in conducting this review.

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As stated previously, proved reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the prices and costs at which economic producibility from a reservoir is to be determined. To confirm that the proved reserves reviewed by us meet the SEC requirements to be economically producible, we have reviewed certain primary economic data utilized by PEP relating to hydrocarbon prices and costs as noted herein.

The hydrocarbon prices furnished by PEP for the properties reviewed by us are based on SEC price parameters using the average prices during the 12-month period prior to the "as of date" of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements. For hydrocarbon products sold under contract, the contract prices, including fixed and determinable escalations exclusive of inflation adjustments, were used until expiration of the contract. Upon contract expiration, the prices were adjusted to the 12-month unweighted arithmetic average as previously described.

The initial SEC hydrocarbon prices in effect on December 31, 2015 for the properties reviewed by us were determined using the 12-month average first-day-of-the-month prices appropriate to the geographic areas where the hydrocarbons are sold. These prices are the actual prices received by PEP for the sale of hydrocarbon products to its affiliates such as Pemex - Refinación.

Certain properties included herein are operated by other operators under specified operating contracts. Under the terms of

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these contracts, the other operators have the right to operate and produce hydrocarbons; however, the produced volumes are ultimately delivered to PEP for marketing. Such contracts signed between PEP and the other operators also dictate that the reserves associated with the contract areas are the property of the United Mexican States.

The table below summarizes PEP's net volume weighted prices adjusted for differentials for the properties reviewed by us by geographic areas and referred to herein as PEP's "average realized prices." The average realized prices shown in the table below were determined from PEP's estimate of the total future gross revenue before production taxes for the properties reviewed by us and PEP's estimate of the total net reserves for the properties reviewed by us for each of the areas referred to as Activos in the Northern Region. The data shown in the table below is presented in accordance with SEC disclosure requirements for each of the geographic areas within the Northern Region reviewed by us.

Geographic Area (Activo)	Product	Average Realized Prices
Bellota-Jujo	Oil/Condensate	\$54.41/Bbl
	Gas	\$3.97/MCF
Cinco Presidentes	Oil/Condensate	\$54.08/Bbl
	Gas	\$4.74/MCF
Macuspana-Muspac	Oil/Condensate	\$53.17/Bbl
	Gas	\$3.98/MCF
Samaria-Luna	Oil/Condensate	\$52.03/Bbl
	Gas	\$4.17/MCF

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The effects of derivative instruments designated as price hedges of oil and gas quantities are not reflected in PEP's individual property evaluations.

Accumulated gas production imbalances, if any, were not taken into account in the proved gas reserve estimates reviewed. The proved gas volumes included herein do not attribute gas consumed in operations as reserves.

Operating costs furnished by PEP are based on the operating expense reports of PEP and include only those costs directly applicable to the fields or wells for the properties reviewed by us. The operating costs include a portion of general and administrative costs allocated directly to the fields and wells. The operating costs furnished by PEP were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by PEP. No deduction was made for loan repayments, interest expenses, or exploration and development prepayments that were not charged directly to the fields, wells or contract areas.

Development costs furnished by PEP are based on authorizations for expenditure for the proposed work or actual costs for similar projects. The development costs furnished by PEP were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by PEP. At PEP's request, abandonment costs were not considered in our economic evaluation.

The proved developed non-producing and undeveloped reserves for the operated and non-operated properties reviewed by us have been incorporated herein in accordance with PEP's and the other operator's plans to develop these reserves as of December 31, 2015. The implementation of these development plans as presented to us is subject to the approval process adopted by PEP's management. As the result of our inquiries during the course of our review, PEP has informed us that the development activities for the properties reviewed by us have been subjected to and received the internal approvals required by PEP's management at the appropriate local, regional and/or corporate level. PEP has also informed us that the same type of approval process has been conducted by the other operators for those properties that such companies operate. Additionally, PEP has informed us that they are not aware of any legal, regulatory or political obstacles that would significantly alter their plans. While these plans could change from those under existing economic conditions as of December 31, 2015, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in making this evaluation.

As previously stated, certain contract areas that we reviewed are not operated by PEP. According to the new Mexican hydrocarbon law these operating companies have the option to convert the contractual terms currently in place to other types of contractual arrangements such as Concession Licenses, Production Sharing Contracts or Profit Sharing Contracts. While current negotiations are or will soon be in progress, there are no new contractual arrangements for such areas in effect as of the date of this report. Therefore, the reserves reported herein for these areas are based on the existing contractual terms that were effective as of December 31, 2015. Furthermore, PEP has informed us that the final development plans for such contractual areas not operated by PEP are dictated by PEP and any differences in plans between the operator and PEP, should they occur, are ultimately decided by PEP.

Current costs used by PEP were held constant throughout the life of the properties.

PEP's forecasts of future production rates are based on historical performance from wells currently on production. If no production decline trend has been established, future production rates were held constant until a decline in ability to produce was anticipated. An estimated rate of decline was then applied to depletion of the reserves. If a decline trend has been established, this trend was used as the basis for estimating future production rates.

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Test data and other related information were used by PEP to estimate the anticipated initial production rates for those wells or locations that are not currently producing. For reserves not yet on production, sales were estimated to commence at an anticipated date furnished by PEP. Wells or locations that are not currently producing may start producing earlier or later than anticipated in PEP's estimates due to unforeseen factors causing a change in the timing to initiate production. Such factors may include delays due to weather, the availability of rigs, the sequence of drilling, completing and/or recompleting wells and/or constraints set by regulatory bodies.

The future production rates from wells currently on production or wells or locations that are not currently producing may be more or less than estimated because of changes including, but not limited to, reservoir performance, operating conditions related to surface facilities, compression and artificial lift, pipeline capacity and/or operating conditions, producing market demand and/or allowables or other constraints set by regulatory bodies.

Ryder Scott did not evaluate the country and geopolitical risks in the country of Mexico where all of the subject properties are located. PEP's operations and the operations of the other companies may be subject to various levels of governmental controls and regulations. These controls and regulations may include, but may not be limited to, matters relating to land tenure and use, drilling and production practices, environmental protection, marketing and pricing policies, various taxes and levies and are subject to change from time to time. The Political Constitution of the United Mexican States provides that the Mexican nation, not Pemex or the other operators owns all petroleum and other hydrocarbon reserves located in Mexico.

Certain properties included herein are operated by other operators under specified operating contracts. Under the terms of these contracts, the other operators have the right to operate and produce hydrocarbons; however, the produced volumes are ultimately delivered to PEP for marketing. Such contracts signed between PEP and the other operators also dictate that the reserves associated with the contract areas are the property of the United Mexican States. The Political Constitution of the United Mexican States provides that the Mexican nation, not Pemex or the other operators owns all petroleum and other hydrocarbon reserves located in Mexico.

Although Mexican law has previously given Pemex the exclusive right to exploit Mexico's hydrocarbon reserves either as operator or under agreements with other operators, certain new laws were enacted in December 2013 that in the future will permit foreign companies to operate under other types of contracts that would potentially enable such companies to report reserves based on SEC criteria. It is expected that such laws will result in the participation of foreign companies in the upstream exploitation of certain oil and gas properties, which as of December 31, 2015 were under the operatorship of PEP and which reserves are included in this report. Such changes as well as potential changes to the contractual terms of the areas that are currently operated by others and also included in this report could cause volumes of proved reserves actually recovered and amounts of proved income actually received to differ significantly from the estimated quantities presented herein.

The estimates of proved reserves presented herein were based upon a review of the subject properties; however, we have not made any field examination of the properties. No consideration was given in this report to potential environmental liabilities that may exist nor were any costs included by PEP for potential liabilities to restore and clean up damages, if any, caused

by past operating practices.

RYDER SCOTT COMPANY    PETROLEUM CONSULTANTS

Pemex Exploración y Producción  
April 29, 2016  
Page 8

Certain technical personnel of PEP are responsible for the preparation of reserve estimates on new properties and for the preparation of revised estimates, when necessary, on old properties. These personnel assembled the necessary data and maintained the data and workpapers in an orderly manner. We consulted with these technical personnel and had access to their workpapers and supporting data in the course of our audit.

PEP has informed us that for both the operated and non-operated properties they have furnished us all of the material accounts, records, geological and engineering data, and reports and other data required for this investigation. In performing our audit of PEP's forecast of future proved production, we have relied upon data furnished by PEP with respect to property interests, production and well tests from examined wells, normal direct costs of operating the properties, other costs such as transportation and/or processing fees, recompletion and development costs, development plans, product prices based on the SEC regulations, adjustments or differentials to product prices, geological structural and isochore maps, well logs, core analyses, and pressure measurements. For non-operated properties, the costs provided by Pemex include all charges related to the expense of such contractual obligations. Ryder Scott reviewed such factual data for its reasonableness; however, we have not conducted an independent verification of the data furnished by PEP. The data described herein were accepted as authentic and sufficient for determining the reserves unless, during the course of our examination, a matter of question came to our attention in which case the data were not accepted until all questions were satisfactorily resolved. We consider the factual data furnished to us by PEP to be appropriate and sufficient for the purpose of our review of PEP's estimates of reserves. In summary, we consider the assumptions, data, methods and analytical procedures used by PEP and as reviewed by us appropriate for the purpose hereof, and we have used all such methods and procedures that we consider necessary and appropriate under the circumstances to render the conclusions set forth herein.

**Audit Opinion**

Based on our review, including the data, technical processes and interpretations presented by PEP, it is our opinion that the overall procedures and methodologies utilized by PEP in preparing their estimates of the proved reserves as of December 31, 2015 comply with the current SEC regulations and that the overall proved reserves in terms of barrels of oil equivalent (BOE) for the reviewed properties as estimated by PEP are, in the aggregate, reasonable within the established audit tolerance guidelines of 10 percent as set forth in the SPE auditing standards.

We were in reasonable agreement with PEP's estimates of proved reserves for the properties which we reviewed; however, in certain cases there was more than an acceptable variance between PEP's estimates and our estimates due to a difference in interpretation of data or due to our having access to data which were not available to PEP when its reserve estimates were prepared. In these cases, PEP revised its estimates to better conform to our estimates. As a consequence, it is our opinion that on an aggregate basis the data presented herein for the properties that we reviewed fairly reflects the estimated net reserves for those properties, both operated and non-operated, and owned by the United Mexican States.

The same technical personnel of PEP were responsible for the preparation of the reserve estimates for the properties that we reviewed as well as for the properties not reviewed by Ryder Scott.

**Standards of Independence and Professional Qualification**

Ryder Scott is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1937. Ryder Scott is employee-owned and maintains offices in Houston, Texas; Denver, Colorado; and Calgary, Alberta, Canada. We have over

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April 29, 2016  
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eighty engineers and geoscientists on our permanent staff. By virtue of the size of our firm and the large number of clients for

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**

which we provide services, no single client or job represents a material portion of our annual revenue. We do not serve as officers or directors of any privately-owned or publicly-traded oil and gas company and are separate and independent from the operating and investment decision-making process of our clients. This allows us to bring the highest level of independence and objectivity to each engagement for our services.

Ryder Scott actively participates in industry-related professional societies and organizes an annual public forum focused on the subject of reserves evaluations and SEC regulations. Many of our staff have authored or co-authored technical papers on the subject of reserves related topics. We encourage our staff to maintain and enhance their professional skills by actively participating in ongoing continuing education.

Prior to becoming an officer of the Company, Ryder Scott requires that staff engineers and geoscientists have received professional accreditation in the form of a registered or certified professional engineer's license or a registered or certified professional geoscientist's license, or the equivalent thereof, from an appropriate governmental authority or a recognized self-regulating professional organization.

We are independent petroleum engineers with respect to PEP. Neither we nor any of our employees have any financial interest in the subject properties, and neither the employment to do this work nor the compensation is contingent on our estimates of reserves for the properties which were reviewed.

The results of this audit, presented herein, are based on technical analysis conducted by teams of geoscientists and engineers from Ryder Scott. The professional qualifications of the undersigned, the technical person primarily responsible for the review of the reserves information discussed in this report, are included as an attachment to this letter.

**Terms of Usage**

The results of our third party audit, presented in report form herein, were prepared in accordance with the disclosure requirements set forth in the SEC regulations and intended for public disclosure as an exhibit in filings made with the SEC by Pemex.

Pemex makes periodic filings on Form 20-F with the SEC under the 1934 Exchange Act. Furthermore, Pemex files registration statements with the SEC under the 1933 Securities Act into which filings on Form 20-F are incorporated by reference. We have consented to the references to our name in and the filing of this report as an exhibit to the annual report on Form 20-F of Pemex for the year ended December 31, 2015. Our written consent for such use will be included as a separate exhibit to such Form 20-F. In the event the references to our name as well as references to our report are incorporated by reference into any registration statement on Form F-4, then our written consent for such use will be included as a separate exhibit to such registration statement.

We have provided PEP with a digital version of the original signed copy of this report letter. In the event there are any differences between the digital version included in filings made by Pemex and the original signed report letter, the original signed report letter shall control and supersede the digital version.

RYDER SCOTT COMPANY   PETROLEUM CONSULTANTS

Pemex Exploración y Producción  
April 29, 2016  
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The data and workpapers used in the preparation of this report are available for examination by authorized parties in our offices. Please contact us if we can be of further service.

Very truly yours,

RYDER SCOTT COMPANY, L.P.  
TBPE Firm Registration No. F-1580





Guale Ramirez, P.E.  
TBPE License No. 48318  
Executive Vice President

GR (DPR)/pl



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### Professional Qualifications of Primary Technical Person

The conclusions presented in this report are the result of technical analysis conducted by teams of geoscientists and engineers from Ryder Scott Company, L.P. Guadalupe Ramirez was the primary technical person responsible for overseeing the estimate of the reserves, future production and income.

Mr. Ramirez, an employee of Ryder Scott Company, L.P. (Ryder Scott) since 1981, is the Executive Vice President and also serves as a member of the Board of Directors. He is responsible for coordinating and supervising staff and consulting engineers of the company in ongoing reservoir evaluation studies worldwide. Before joining Ryder Scott, Mr. Ramirez served in a number of engineering positions with Sun Oil Company and Natomas North America. For more information regarding Mr. Ramirez's geographic and job specific experience, please refer to the Ryder Scott Company website at [www.ryderscott.com/Company/Employees](http://www.ryderscott.com/Company/Employees).

Mr. Ramirez earned a Bachelor of Science Degree in Mechanical Engineering with honors from Texas A&M University in 1976 and is a licensed Professional Engineer in the State of Texas. He is also a member of the Society of Petroleum Engineers and Society of Petroleum Evaluation Engineers.

In addition to gaining experience and competency through prior work experience, the Texas Board of Professional Engineers requires a minimum of fifteen hours of continuing education annually, including at least one hour in the area of professional ethics, which Mr. Ramirez fulfills. As part of his 2015 continuing education hours, Mr. Ramirez attended an internally received 14 hours of formalized training as well as a day-long public forum, the 2014 RSC Reserves Conference relating to the definitions and disclosure guidelines contained in the United States Securities and Exchange Commission Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009 in the Federal Register. Mr. Ramirez has also presented courses on the new SEC and SPE-PRMS reserves definitions on various occasions during 2011, 2012 and 2013 and received 36 hours of formalized external training during 2015, covering such topics as the Guidelines for Application of the SPE/WPC/AAPG/SPEE Petroleum Resources Management System, reservoir engineering, geoscience and petroleum economics evaluation methods, procedures and software, unconventional resources and ethics for consultants.

Based on his educational background, professional training and more than 35 years of practical experience in the estimation and evaluation of petroleum reserves, Mr. Ramirez has attained the professional qualifications as a Reserves Estimator and Reserves Auditor set forth in Article III of the "Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information" promulgated by the Society of Petroleum Engineers as of February 19, 2007.

RYDER SCOTT COMPANY PETROLEUM CONSULTANTS

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PETROLEUM RESERVES DEFINITIONS

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)

**PREAMBLE**

On January 14, 2009, the United States Securities and Exchange Commission (SEC) published the “Modernization of Oil and Gas Reporting; Final Rule” in the Federal Register of National Archives and Records Administration (NARA). The “Modernization of Oil and Gas Reporting; Final Rule” includes revisions and additions to the definition section in Rule 4-10 of Regulation S-X, revisions and additions to the oil and gas reporting requirements in Regulation S-K, and amends and codifies Industry Guide 2 in Regulation S-K. The “Modernization of Oil and Gas Reporting; Final Rule”, including all references to Regulation S-X and Regulation S-K, shall be referred to herein collectively as the “SEC regulations”. The SEC regulations take effect for all filings made with the United States Securities and Exchange Commission as of December 31, 2009, or after January 1, 2010. Reference should be made to the full text under Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) for the complete definitions (direct passages excerpted in part or wholly from the aforementioned SEC document are denoted in italics herein).

*Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.* All reserve estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-classified as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. Under the SEC regulations as of December 31, 2009, or after January 1, 2010, a company may optionally disclose estimated quantities of probable or possible oil and gas reserves in documents publicly filed with the SEC. The SEC regulations continue to prohibit disclosure of estimates of oil and gas resources other than reserves and any estimated values of such resources in any document publicly filed with the SEC unless such information is required to be disclosed in the document by foreign or state law as noted in §229.1202 Instruction to Item 1202.

Reserves estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change.

Reserves may be attributed to either natural energy or improved recovery methods. Improved recovery methods include all methods for supplementing natural energy or altering natural forces in the reservoir to increase ultimate recovery. Examples of such methods are pressure maintenance, natural gas cycling, waterflooding, thermal methods, chemical flooding, and the use of miscible and immiscible displacement fluids. Other improved recovery methods may be developed in the future as petroleum technology continues to evolve.

Reserves may be attributed to either conventional or unconventional petroleum accumulations. Petroleum accumulations are considered as either conventional or unconventional based on the nature of their in-place characteristics, extraction method applied, or degree of processing prior to sale.

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PETROLEUM RESERVES DEFINITIONS  
Page 2

Examples of unconventional petroleum accumulations include coalbed or coalseam methane (CBM/CSM), basin-centered gas, shale gas, gas hydrates, natural bitumen and oil shale deposits. These unconventional accumulations may require specialized extraction technology and/or significant processing prior to sale.

Reserves do not include quantities of petroleum being held in inventory.

Because of the differences in uncertainty, caution should be exercised when aggregating quantities of petroleum from different reserves categories.

RESERVES (SEC DEFINITIONS)

Securities and Exchange Commission Regulation S-X §210.4-10(a)(26) defines reserves as follows:

**Reserves.** *Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.*

Note to paragraph (a)(26): *Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (i.e., potentially recoverable resources from undiscovered accumulations).*

PROVED RESERVES (SEC DEFINITIONS)

Securities and Exchange Commission Regulation S-X §210.4-10(a)(22) defines proved oil and gas reserves as follows:

**Proved oil and gas reserves.** *Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.*

(i) *The area of the reservoir considered as proved includes:*

(A) *The area identified by drilling and limited by fluid contacts, if any, and*

(B) *Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.*

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PROVED RESERVES (SEC DEFINITIONS) CONTINUED

(ii) *In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.*

(iii) *Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.*

(iv) *Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:*

(A) *Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and*

(B) *The project has been approved for development by all necessary parties and entities, including governmental entities.*

(v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.

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PETROLEUM RESERVES STATUS DEFINITIONS AND GUIDELINES

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)

and

PETROLEUM RESOURCES MANAGEMENT SYSTEM (SPE-PRMS)

Sponsored and Approved by:

SOCIETY OF PETROLEUM ENGINEERS (SPE)

WORLD PETROLEUM COUNCIL (WPC)

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS (AAPG)

SOCIETY OF PETROLEUM EVALUATION ENGINEERS (SPEE)

Reserves status categories define the development and producing status of wells and reservoirs. Reference should be made to Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) and the SPE-PRMS as the following reserves status definitions are based on excerpts from the original documents (direct passages excerpted from the aforementioned SEC and SPE-PRMS documents are denoted in italics herein).

DEVELOPED RESERVES (SEC DEFINITIONS)

Securities and Exchange Commission Regulation S-X §210.4-10(a)(6) defines developed oil and gas reserves as follows:

*Developed oil and gas reserves are reserves of any category that can be expected to be recovered:*

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and*
- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.*

Developed Producing (SPE-PRMS Definitions)

While not a requirement for disclosure under the SEC regulations, developed oil and gas reserves may be further sub-classified according to the guidance contained in the SPE-PRMS as Producing or Non-Producing.

**Developed Producing Reserves**

*Developed Producing Reserves are expected to be recovered from completion intervals that are open and producing at the time of the estimate.*

*Improved recovery reserves are considered producing only after the improved recovery project is in operation.*

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**Developed Non-Producing**

*Developed Non-Producing Reserves include shut-in and behind-pipe reserves.*

**Shut-In**

*Shut-in Reserves are expected to be recovered from:*

- (1) completion intervals which are open at the time of the estimate, but which have not started producing;*
- (2) wells which were shut-in for market conditions or pipeline connections; or*
- (3) wells not capable of production for mechanical reasons.*

**Behind-Pipe**

*Behind-pipe Reserves are expected to be recovered from zones in existing wells, which will require additional completion work or future re-completion prior to start of production.*

*In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.*

**UNDEVELOPED RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(31) defines undeveloped oil and gas reserves as follows:

*Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.*

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.*
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.*
- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.*

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PRESIDENT - ROBERT C. BARG

VICE PRESIDENTS  
ALLEN E. EVANS, JR.  
RANDOLPH K. GREEN  
JOHN G. HATTNER  
C. H. (SCOTT) REES III  
DANNY D. SIMMONS  
DAN PAUL SMITH  
THOMAS M. SOUERS

April 29, 2016

Dr. José Antonio González Anaya  
Petróleos Mexicanos  
Avenida Marina Nacional No. 329  
Torre Ejecutiva, Piso 44  
Colonia Verónica Anzures  
11300 Ciudad de México  
México

Dear Dr. González Anaya:

We hereby consent to all references to our firm as set forth in the Annual Report on Form 20-F of Petróleos Mexicanos ("Pemex") for the year ending December 31, 2015 (the "Form 20-F"), under the heading "Exploration and Production (Reserves)", and to the filing of our audit letter dated April 29, 2016, as an exhibit to the Form 20-F. We have audited the estimates of Pemex's proved oil, condensate, natural gas, and oil equivalent reserves, as of January 1, 2016, for 78 fields located in the Poza Rica-Altamira District in the North Region of Mexico. These estimates were prepared by Pemex Exploración y Producción in accordance with the reserves definitions of Regulation S-X Rule 4-10(a) of the U.S. Securities and Exchange Commission.

Sincerely,

NETHERLAND, SEWELL INTERNATIONAL, S. DE R.L. DE C.V.

By: \_\_\_\_\_  
Robert C. Barg, P.E.  
President

EJS:DSS

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April 29, 2016

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Colonia Verónica Anzures  
11300 Ciudad de México  
México

Dear Dr. González Anaya:

We hereby consent to all references to our firm as set forth in the Annual Report on Form 20-F of Petróleos Mexicanos ("Pemex") for the year ending December 31, 2015 (the "Form 20-F"), under the heading "Exploration and Production (Reserves)", and to the filing of our audit letter dated April 29, 2016, as an exhibit to the Form 20-F. We have audited the estimates of Pemex's proved oil, condensate, natural gas, and oil equivalent reserves, as of January 1, 2016, for 23 fields located in the Litoral de Tabasco Asset in the Southwest Marine Region. These estimates were prepared by Pemex Exploración y Producción in accordance with the reserves definitions of Regulation S-X Rule 4-10(a) of the U.S. Securities and Exchange Commission.

Sincerely,

NETHERLAND, SEWELL INTERNATIONAL, S. DE R.L. DE C.V.

By: \_\_\_\_\_  
Robert C. Barg, P.E.  
President

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April 29, 2016

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11300 Ciudad de México  
México

Dear Dr. González Anaya:

In accordance with your request, we have audited the estimates prepared April 22, 2016, by Pemex Exploración y Producción (PEP), as of January 1, 2016, of the gross (100 percent) proved reserves in 78 fields located in Poza Rica-Altamira District, Mexico. The Political Constitution of the United Mexican States provides that the Mexican nation owns all petroleum and other hydrocarbon reserves for these fields; however, these fields are currently operated by PEP. In accordance with the Energy Reform of 2014, the estimates in this report represent the gross (100 percent) proved reserves to be produced within the economic life of the properties. Economic analysis was performed by PEP only to confirm economic producibility and determine economic limits for the properties. We have examined the estimates with respect to reserves quantities, reserves categorization, and future producing rates, using the definitions set forth in U.S. Securities and Exchange Commission (SEC) Regulation S-X Rule 4-10(a). The estimates of reserves have been prepared in accordance with the definitions and regulations of the SEC and conform to the FASB Accounting Standards Codification Topic 932, Extractive Activities—Oil and Gas. We completed our audit on or about the date of this letter. This report has been prepared for Petróleos Mexicanos' use in filing with the SEC; in our opinion the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose.

The following table sets forth PEP's estimates of the gross (100 percent) reserves, as of January 1, 2016, for the audited properties:

Category	Gross (100%) Reserves				
	Crude Oil (MMBBL)	Condensate (MMBBL)	Plant Liquids (MMBBL)	Dry Gas(1) (MMBOE)	BOE (MMBBL)
Proved Developed Producing	91.8	0.0	1.9	8.3	101.9
Proved Developed Non-Producing	18.7	0.0	0.6	2.8	22.1
Proved Undeveloped	76.9	0.0	2.6	10.9	90.4
Total Proved	187.4	0.0	5.1	22.0	214.4

(1) Dry gas reserves are the dry, sweetened gas available for sale by Pemex Transformación Industrial at the tailgate of the processing plants.

Crude oil, condensate, plant liquids, and barrels of oil equivalent (BOE) volumes are expressed in millions of barrels (MMBBL); a barrel is equivalent to 42 United States gallons. Dry gas volumes are expressed in millions of barrels of oil equivalent (MMBOE), determined using dry gas conversion factors provided by PEP.





When compared on a field-by-field basis, some of the estimates of PEP are greater and some are less than the estimates of Netherland, Sewell International, S. de R.L. de C.V. (NSI). However, in our opinion the estimates of reserves prepared by PEP shown herein are reasonable when aggregated at the total proved level and have been prepared in accordance with the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (SPE Standards). Additionally, these estimates are within the recommended 10 percent tolerance threshold set forth in the SPE Standards. We are satisfied with the methods and procedures used by PEP in preparing the January 1, 2016, estimates of reserves, and we saw nothing of an unusual nature that would cause us to take exception with the estimates, in the aggregate, as prepared by PEP.

The estimates shown herein are for proved reserves. PEP's estimates do not include probable or possible reserves that exist for these properties. Reserves categorization conveys the relative degree of certainty; reserves subcategorization is based on development and production status. The estimates of reserves included herein have not been adjusted for risk.

Oil and gas prices were used only to confirm economic producibility and determine economic limits for the properties. It is our understanding that prices used by PEP are based on the 12-month unweighted arithmetic average of the first-day-of-the-month price for each month in the period January through December 2015. All prices are held constant throughout the lives of the properties.

Costs were used only to confirm economic producibility and determine economic limits for the properties. Operating costs used by PEP are based on historical operating expense records. These costs include district and regional overhead expenses along with costs to be incurred at the field level. Operating costs have been divided into field-level costs, per-well costs, and per-unit-of-production costs. No headquarters general and administrative overhead expenses of PEP or Petróleos Mexicanos are included. Capital costs used by PEP are based on authorizations for expenditure and actual costs from recent activity. Capital costs are included as required for workovers, new development wells, and production equipment. Abandonment costs used are PEP's estimates of the costs to abandon the wells, platforms, and production facilities, net of any salvage value. Operating, capital, and abandonment costs are not escalated for inflation.

The reserves shown in this report are estimates only and should not be construed as exact quantities. Proved reserves are those quantities of oil and gas which, by analysis of engineering and geoscience data, can be estimated with reasonable certainty to be economically producible; probable and possible reserves are those additional reserves which are sequentially less certain to be recovered than proved reserves. Estimates of reserves may increase or decrease as a result of market conditions, future operations, changes in regulations, or actual reservoir performance. In addition to the primary economic assumptions discussed herein, estimates of PEP and NSI are based on certain assumptions including, but not limited to, that the properties will be developed consistent with current development plans as provided to us by PEP, that the properties will be operated in a prudent manner, that no governmental regulations or controls will be put in place that would impact the ability of PEP to recover the reserves, and that projections of future production will prove consistent with actual performance. If the reserves are recovered, the revenues therefrom and the costs related thereto could be more or less than the estimated amounts used to confirm economic producibility and determine economic limits for the properties. Because of governmental policies and uncertainties of supply and demand, the sales rates, prices received for the reserves, and costs incurred in recovering such reserves may vary from assumptions made while preparing these estimates.

It should be understood that our audit does not constitute a complete reserves study of the audited oil and gas properties. Our audit consisted primarily of substantive testing, wherein we conducted a detailed review of all properties making up the total proved reserves. In the conduct of our audit, we have not independently verified the accuracy and completeness of information and data furnished by PEP with respect to oil and gas production, well test data, historical costs of operation and development, product prices, or any agreements relating to current and future operations of the properties and sales of production. However, if in the course of our examination something came to our attention that brought into question the validity or sufficiency of any such information or data, we did not rely on such information or data until we had satisfactorily resolved our questions relating thereto or had independently verified such information or data. Our audit did not include a review of PEP's overall reserves management processes and practices.






We used standard engineering and geoscience methods, or a combination of methods, including performance analysis, volumetric analysis, and analogy, that we considered to be appropriate and necessary to establish the conclusions set forth herein. As in all aspects of oil and gas evaluation, there are uncertainties inherent in the interpretation of engineering and geoscience data; therefore, our conclusions necessarily represent only informed professional judgment.

Supporting data documenting this audit, along with data provided by PEP, are on file in our office. The technical persons primarily responsible for conducting this audit meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the SPE Standards. Randolph K. Green, a Licensed Professional Engineer in the State of Texas, has been practicing consulting petroleum engineering at NSAI since 1983. John G. Hattner, a Licensed Professional Geoscientist in the State of Texas, has been practicing consulting petroleum geoscience at NSAI since 1991 and has 11 years of prior industry experience. We are independent petroleum engineers, geologists, geophysicists, and petrophysicists; we do not own an interest in these properties nor are we employed on a contingent basis.

Sincerely,

NETHERLAND, SEWELL INTERNATIONAL, S. DE R.L. DE C.V.

By:   
Robert C. Barg, P.E.  
President

By:   
Randolph K. Green, P.E. 72951  
Vice President  
  
Date Signed: April 29, 2016  
EJS:DSS



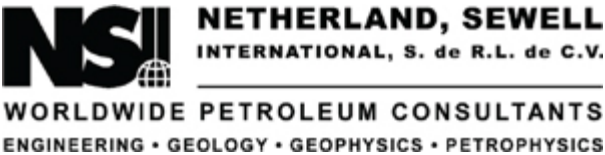
By:   
John G. Hattner, P.G. 559  
Vice President  
  
Date Signed: April 29, 2016

Exhibit 10.4 (2 of 2)



- PRESIDENT - ROBERT C. BARG
- VICE PRESIDENTS
- ALLEN E. EVANS, JR.
  - RANDOLPH K. GREEN
  - JOHN G. HATTNER
  - C. H. (SCOTT) REES III
  - DANNY D. SIMMONS
  - DAN PAUL SMITH
  - THOMAS M. SOUERS

April 29, 2016

C-0030, Pemex Form 20-F (Dec. 31, 2015)

Dr. José Antonio González Anaya  
Petróleos Mexicanos  
Avenida Marina Nacional No. 329  
Torre Ejecutiva, Piso 44  
Colonia Verónica Anzures  
11300 Ciudad de México  
México

Dear Dr. González Anaya:

In accordance with your request, we have audited the estimates prepared February 25, 2016, by Pemex Exploración y Producción (PEP), as of January 1, 2016, of the gross (100 percent) proved reserves in 23 fields located in Litoral de Tabasco District, Mexico. The Political Constitution of the United Mexican States provides that the Mexican nation owns all petroleum and other hydrocarbon reserves for these fields; however, these fields are currently operated by PEP. In accordance with the Energy Reform of 2014, the estimates in this report represent the gross (100 percent) proved reserves to be produced within the economic life of the properties. We have examined the estimates with respect to reserves quantities, reserves categorization, and future producing rates, using the definitions set forth in U.S. Securities and Exchange Commission (SEC) Regulation S-X Rule 4-10(a). Economic analysis was performed by PEP only to confirm economic producibility and determine economic limits for the properties. The estimates of reserves have been prepared in accordance with the definitions and regulations of the SEC and conform to the FASB Accounting Standards Codification Topic 932, Extractive Activities—Oil and Gas. We completed our audit on February 26, 2016. This report has been prepared for Petróleos Mexicanos' use in filing with the SEC; in our opinion the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose.

The following table sets forth PEP's estimates of the gross (100 percent) reserves, as of January 1, 2016, for the audited properties:

Category	Gross (100%) Reserves				
	Crude Oil (MMBBL)	Condensate (MMBBL)	Plant Liquids (MMBBL)	Dry Gas(1) (MMBOE)	BOE (MMBBL)
Proved Developed Producing	322.7	4.8	95.9	177.9	601.3
Proved Developed Non-Producing	68.0	1.2	18.7	34.7	122.5
Proved Undeveloped	281.7	6.4	15.4	117.7	421.2
Total Proved	672.4	12.4	129.9	330.3	1,145.0

Totals may not add because of rounding.

(1) Dry gas reserves are the dry, sweetened gas available for sale by Pemex Transformación Industrial at the tailgate of the processing plants.

Crude oil, condensate, plant liquids, and barrels of oil equivalent (BOE) volumes are expressed in millions of barrels (MMBBL); a barrel is equivalent to 42 United States gallons. Dry gas volumes are expressed in millions of barrels of oil equivalent (MMBOE), determined using dry gas conversion factors provided by PEP.

2100 ROSS AVENUE, SUITE 2200 • DALLAS, TEXAS 75201-2737 • PH: 214-969-5401 • FAX: 214-969-5411



When compared on a field-by-field basis, some of the estimates of PEP are greater and some are less than the estimates of Netherland, Sewell International, S. de R.L. de C.V. (NSI). However, in our opinion the estimates of reserves prepared by PEP shown herein are reasonable when aggregated at the total proved level and have been prepared in accordance with the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (SPE Standards). Additionally, these estimates are within the recommended 10 percent tolerance threshold set forth in the SPE

Standards. We are satisfied with the methods and procedures used by PEP in preparing the January 1, 2016, estimates of reserves, and we saw nothing of an unusual nature that would cause us to take exception with the estimates, in the aggregate, as prepared by PEP.

The estimates shown herein are for proved reserves. PEP's estimates do not include probable or possible reserves that exist for these properties. Reserves categorization conveys the relative degree of certainty; reserves subcategorization is based on development and production status. The estimates of reserves included herein have not been adjusted for risk.

Oil and gas prices were used only to confirm economic producibility and determine economic limits for the properties. It is our understanding that prices used by PEP are based on the 12-month unweighted arithmetic average of the first-day-of-the-month price for each month in the period January through December 2015. All prices are held constant throughout the lives of the properties.

Costs were used only to confirm economic producibility and determine economic limits for the properties. Operating costs used by PEP are based on historical operating expense records. These costs include district and regional overhead expenses along with costs to be incurred at the field level. Operating costs have been divided into field-level costs, per-well costs, and per-unit-of-production costs. No headquarters general and administrative overhead expenses of PEP or Petróleos Mexicanos are included. Capital costs used by PEP are based on authorizations for expenditure and actual costs from recent activity. Capital costs are included as required for workovers, new development wells, and production equipment. Abandonment costs used are PEP's estimates of the costs to abandon the wells, platforms, and production facilities, net of any salvage value. Operating, capital, and abandonment costs are not escalated for inflation.

The reserves shown in this report are estimates only and should not be construed as exact quantities. Proved reserves are those quantities of oil and gas which, by analysis of engineering and geoscience data, can be estimated with reasonable certainty to be economically producible; probable and possible reserves are those additional reserves which are sequentially less certain to be recovered than proved reserves. Estimates of reserves may increase or decrease as a result of market conditions, future operations, changes in regulations, or actual reservoir performance. In addition to the primary economic assumptions discussed herein, estimates of PEP and NSI are based on certain assumptions including, but not limited to, that the properties will be developed consistent with current development plans as provided to us by PEP, that the properties will be operated in a prudent manner, that no governmental regulations or controls will be put in place that would impact the ability of PEP to recover the reserves, and that projections of future production will prove consistent with actual performance. If the reserves are recovered, the revenues therefrom and the costs related thereto could be more or less than the estimated amounts used to confirm economic producibility and determine economic limits for the properties. Because of governmental policies and uncertainties of supply and demand, the sales rates, prices received for the reserves, and costs incurred in recovering such reserves may vary from assumptions made while preparing these estimates.

It should be understood that our audit does not constitute a complete reserves study of the audited oil and gas properties. Our audit consisted primarily of substantive testing, wherein we conducted a detailed review of all properties making up the total proved reserves. In the conduct of our audit, we have not independently verified the accuracy and completeness of information and data furnished by PEP with respect to oil and gas production, well test data, historical costs of operation and development, product prices, or any agreements relating to current and future operations of the properties and sales of production. However, if in the course of our examination something came to our attention that brought into question the validity or sufficiency of any such information or data, we did not rely on such information or data until we had satisfactorily resolved our questions relating thereto or had independently verified such information or data. Our audit did not include a review of PEP's overall reserves management processes and practices.



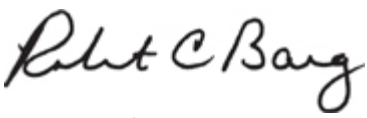
We used standard engineering and geoscience methods, or a combination of methods, including performance analysis, volumetric analysis, analogy, and reservoir modeling, that we considered to be appropriate and necessary to establish the conclusions set forth herein. As in all aspects of oil and gas evaluation, there are uncertainties inherent in the interpretation of engineering and geoscience data; therefore, our conclusions necessarily represent only informed professional judgment.

Supporting data documenting this audit, along with data provided by PEP, are on file in our office. The technical persons primarily responsible for conducting this audit meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the SPE Standards. Andres F. Castaño, a Licensed Professional Engineer in the State of Texas, has been practicing

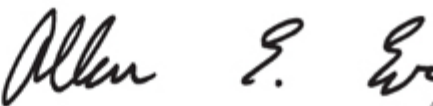
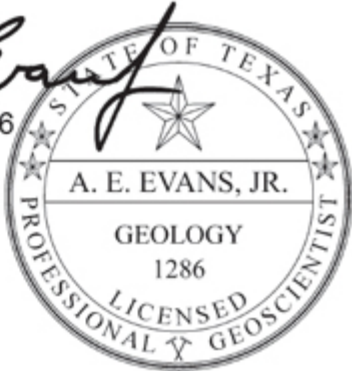
consulting petroleum engineering at NSAI since 2013 and has 8 years of prior industry experience. Allen E. Evans, Jr., a Licensed Professional Geoscientist in the State of Texas, has been practicing consulting petroleum geoscience at NSAI since 1996 and has 13 years of prior industry experience. We are independent petroleum engineers, geologists, geophysicists, and petrophysicists; we do not own an interest in these properties nor are we employed on a contingent basis.

Sincerely,

NETHERLAND, SEWELL INTERNATIONAL, S. DE R.L. DE C.V.

By:   
Robert C. Barg, P.E.  
President

By:   
Andres F. Castaño, P.E. 121698  
Petroleum Engineer  
  
Date Signed: April 29, 2016  
AFC:LMS

By:   
Allen E. Evans, Jr., P.G. 1286  
Vice President  
  
Date Signed: April 29, 2016

DEGOLYER AND MACNAUGHTON  
5001 SPRING VALLEY ROAD  
SUITE 800 EAST  
DALLAS, TEXAS 75244

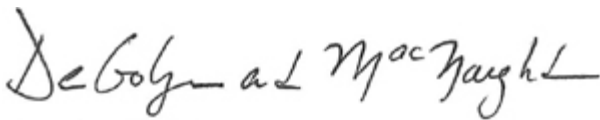
April 29, 2016

Dr. José Antonio González Anaya  
Director General  
Petróleos Mexicanos  
Avenida Marina Nacional No. 329  
Torre Ejecutiva, Piso 44  
Colonia Verónica Anzures  
11300 Ciudad de México, México

Dear Dr. González Anaya:

We hereby consent to the references to DeGolyer and MacNaughton as set forth under the headings “Presentation of Information Concerning Reserves,” “Item 4. Information on the Company – Business Overview – Exploration and Production – Reserves,” and “Item 19. Exhibits. Documents filed as exhibits to this Form 20-F” in the Annual Report on Form 20-F of Petróleos Mexicanos (PEMEX) for the year ended December 31, 2015 (the Form 20-F), and to the filing as Exhibit 10.6 to the Form 20-F of our third-party report dated April 29, 2016, describing our review of the estimates of proved oil, marketable gas, sales gas, condensate, natural gas liquids (NGL), and oil equivalent reserves that PEMEX has represented are owned by the United Mexican States (México) as of January 1, 2016, for certain fields located in the Burgos area of México, which includes reserves that PEMEX has represented that it has the right to extract and sell. These estimates were prepared in accordance with the reserves definitions of Rules 4-10(a) (1)-(32) of Regulation S-X of the United States Securities and Exchange Commission.

Very truly yours,



DeGOLYER and MacNAUGHTON  
Texas Registered Engineering Firm F-716

DEGOLYER AND MACNAUGHTON  
5001 SPRING VALLEY ROAD  
SUITE 800 EAST  
DALLAS, TEXAS 75244

April 29, 2016

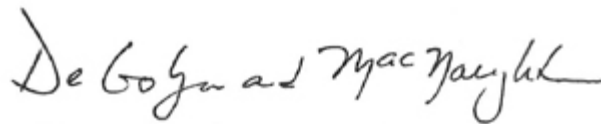
Dr. José Antonio González Anaya

Director General  
Petróleos Mexicanos  
Avenida Marina Nacional No. 329  
Torre Ejecutiva, Piso 44  
Colonia Verónica Anzures  
11300 Ciudad de México, México

Dear Dr. González Anaya:

We hereby consent to the references to DeGolyer and MacNaughton as set forth under the headings “Presentation of Information Concerning Reserves,” “Item 4. Information on the Company – Business Overview – Exploration and Production – Reserves,” and “Item 19. Exhibits. Documents filed as exhibits to this Form 20-F” in the Annual Report on Form 20-F of Petróleos Mexicanos (PEMEX) for the year ended December 31, 2015 (the Form 20-F), and to the filing as Exhibit 10.6 to the Form 20-F of our third-party report dated April 29, 2016, describing our review of the estimates of proved oil, marketable gas, sales gas, condensate, natural gas liquids (NGL), and oil equivalent reserves that PEMEX has represented are owned by the United Mexican States (México) as of January 1, 2016, for certain fields located in the Veracruz area of México, which includes reserves that PEMEX has represented that it has the right to extract and sell. These estimates were prepared in accordance with the reserves definitions of Rules 4-10(a) (1)-(32) of Regulation S-X of the United States Securities and Exchange Commission.

Very truly yours,



DeGOLYER and MacNAUGHTON  
Texas Registered Engineering Firm F-716

DEGOLYER AND MACNAUGHTON  
5001 SPRING VALLEY ROAD  
SUITE 800 EAST  
DALLAS, TEXAS 75244

This is a digital representation of a DeGolyer and MacNaughton report.

This file is intended to be a manifestation of certain data in the subject report and as such are subject to the same conditions thereof. The information and data contained in this file may be subject to misinterpretation; therefore, the signed and bound copy of this report should be considered the only authoritative source of such information.



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DEGOLYER AND MACNAUGHTON  
5001 SPRING VALLEY ROAD  
SUITE 800 EAST  
DALLAS, TEXAS 75244

April 29, 2016

Mr. J. Javier Hinojosa Puebla

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**



Director Ejecutivo  
 PEMEX Exploración y Producción  
 Avenida Marina Nacional No. 329  
 Torre Ejecutiva  
 Colonia Verónica Anzures  
 11300 Ciudad de México, México

Dear Mr. Hinojosa Puebla:

Pursuant to your request, we have conducted a reserves audit of the net proved oil, gas, condensate, and oil equivalent reserves, as of January 1, 2016, of certain properties that PEMEX Exploración y Producción (PEP) has represented are owned by the United Mexican States in the Burgos area of Mexico. This audit was completed on April 29, 2016. PEP has represented that these properties account for 2.2 percent on a net oil equivalent barrel basis of the net proved reserves assigned to PEP, as of January 1, 2016, and that the net proved reserves estimates have been prepared in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the Securities and Exchange Commission (SEC) of the United States. At the request of PEP, we have also included in this report estimates prepared by PEP of its natural gas liquids (NGL) reserves; however, PEP has represented that PEP’s management of the properties stops at the inlet of the gas processing plants. PEP has represented that all subsurface hydrocarbons belong to the United Mexican States, and has further represented that PEP has received a 100-percent assignment in these properties by the United Mexican States; therefore, gross reserves are equal to net reserves and are defined as the total estimated petroleum to be produced from these properties after December 31, 2015. We have reviewed information provided to us by PEP that it represents to be PEP’s estimates of the net reserves, as of January 1, 2016, for the same properties as those which we audited. This report was prepared in accordance with guidelines specified in Item 1202 (a)(8) of Regulation S-K and is to be used for inclusion in certain SEC filings by PEP.

2

DEGOLYER AND MACNAUGHTON

Based on Mexico’s Energy Reform of 2014, PEP has represented that its estimates of the net proved reserves assigned to PEP presented in this report correspond to 92.3 percent of the total net proved reserves of the Burgos area assigned to PEP, on an oil equivalent basis.

Reserves estimates included herein are expressed as net reserves as represented by PEP. Gross reserves are defined as the total estimated petroleum to be produced from these properties after December 31, 2015. Net reserves are defined as that portion of the gross reserves attributable to the interests owned by the United Mexican States after deducting all interests owned by others.

Estimates of oil, gas, condensate, NGL, and oil equivalent reserves should be regarded only as estimates that may change as further production history and additional information become available. Not only are such reserves estimates based on that information which is currently available, but such estimates are also subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

Data used in this audit were obtained from reviews with PEP personnel, from PEP files, from records on file with the appropriate regulatory agencies, and from public sources. In the preparation of this report we have relied, without independent verification, upon such information furnished by PEP with respect to property interests, production from such properties, current costs of operation and development, current prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. A field

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**

examination of the properties was not considered necessary for the purposes of this report.

**Methodology and Procedures**

Estimates of reserves were prepared by the use of appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with practices generally recognized by the petroleum industry as presented in the publication of the Society of Petroleum Engineers entitled “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (Revision as of February 19, 2007).” The method or combination of methods used in the analysis of each reservoir was tempered by experience with similar reservoirs, stage of development, quality and completeness of basic data, and production history.

DEGOLYER AND MACNAUGHTON

Based on the current stage of field development, production performance, the development plans provided by PEP, and the analyses of areas offsetting existing wells with test or production data, reserves were classified as proved.

When applicable, the volumetric method was used to estimate the original oil in place (OOIP) and the original gas in place (OGIP). Structure and isopach maps were constructed to estimate reservoir volume. Electrical logs, radioactivity logs, core analyses, and other available data were used to prepare these maps as well as to estimate representative values for porosity and water saturation. When adequate data were available and when circumstances justified, material balance and other engineering methods were used to estimate OOIP or OGIP.

Estimates of ultimate recovery were obtained after applying recovery factors to OOIP or OGIP. These recovery factors were based on consideration of the type of energy inherent in the reservoirs, analyses of the petroleum, the structural positions of the properties, and the production histories. When applicable, material balance and other engineering methods were used to estimate recovery factors. In such cases, an analysis of reservoir performance, including production rate, reservoir pressure, and gas-oil ratio behavior, was used in the estimation of reserves.

For depletion-type reservoirs or those whose performance disclosed a reliable decline in producing-rate trends or other diagnostic characteristics, reserves were estimated by the application of appropriate decline curves or other performance relationships. In the analyses of production-decline curves, reserves were estimated only to the limits of economic production or to the limit of the production licenses as appropriate.

Gas quantities estimated herein are expressed as marketable gas and sales gas at a temperature base of 20 degrees Celsius (°C) and at a pressure base of 1 atmosphere. Marketable gas is defined as the total gas in the reservoirs to be produced after shrinkage resulting from field separation and flare. Marketable gas includes fuel. Sales gas is defined as the total gas to be produced from the reservoirs, measured at the point of delivery, after reduction for injection, fuel usage, flare, and shrinkage resulting from field separation and plant processing. Oil, condensate, and NGL reserves estimated herein are expressed in terms of 42 United States gallons per barrel. Oil and condensate reserves estimated herein are to be recovered by

DEGOLYER AND MACNAUGHTON

normal field separation. PEP has represented that its NGL reserves have been estimated on the basis of the quantities of liquids recovered from gas delivered to a gas plant for processing, and can include propane, butane, and C5+ fractions.

**Definition of Reserves**

Petroleum reserves estimated by PEP included in this report are classified as proved. Only proved reserves have been evaluated for this report. Reserves classifications used by PEP in this report are in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the SEC. Reserves are judged to be economically producible in future years from known reservoirs under existing economic and operating conditions and assuming continuation of current regulatory practices using conventional production methods and equipment. In the analyses of production-decline curves, reserves were estimated only to the limit of economic rates of production under existing economic and operating conditions using prices and costs consistent with the effective date of this report, including consideration of changes in existing prices provided only by contractual arrangements but not including escalations based upon future conditions. The petroleum reserves are classified as follows:

*Proved oil and gas reserves* – Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.

- (i) The area of the reservoir considered as proved includes:
  - (A) The area identified by drilling and limited by fluid contacts, if any, and
  - (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.

DEGOLYER AND MACNAUGHTON

- (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
- (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish

the higher contact with reasonable certainty.

(iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:

(A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and (B) The project has been approved for development by all necessary parties and entities, including governmental entities.

(v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.

DEGOLYER AND MACNAUGHTON

*Developed oil and gas reserves* – Developed oil and gas reserves are reserves of any category that can be expected to be recovered:

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and
- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.

*Undeveloped oil and gas reserves* – Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances justify a longer time.
- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been

proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in [section 210.4–10 (a) Definitions], or by other evidence using reliable technology establishing reasonable certainty.

DEGOLYER AND MACNAUGHTON

**Primary Economic Assumptions**

The following economic assumptions were used for estimating existing and future prices and costs, expressed in United States dollars (U.S.\$):

*Oil and Condensate Prices*

PEP has represented that the oil and condensate prices were based on a reference price, calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, unless prices are defined by contractual arrangements. The average adjusted product price for all fields was U.S.\$45.48 per barrel, except for the Miahuapán field, which was U.S.\$53.64 per barrel, and the prices were held constant thereafter. These prices were not escalated for inflation.

*Gas Prices*

PEP has represented that the gas prices were based on a 12 month average price, calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, unless prices are defined by contractual arrangements. Each field's calorific value, which includes NGL, was used to determine each field's gas price. The contract prices for the fields audited in this report varied between U.S.\$2.36 and U.S.\$4.87 per thousand cubic feet. These prices were not escalated for inflation.

*Operating Expenses, Capital Costs, and Abandonment Costs*

Operating expenses and capital costs, based on information provided by PEP, were used in estimating future costs required to operate the properties. In certain cases, future costs, either higher or lower than existing costs, may have been used because of anticipated changes in operating conditions. These costs were not escalated for inflation. Abandonment costs were provided by PEP.

DEGOLYER AND MACNAUGHTON

While the oil and gas industry may be subject to regulatory changes from time to time that could affect an industry participant's ability to recover its oil and gas reserves, we are not aware of any such governmental actions which would restrict the recovery of the January 1, 2016, estimated oil, gas, condensate, and NGL reserves.

PEP has represented that its estimated net proved reserves attributable to the reviewed properties are based on the definition of proved reserves of the SEC. PEP represents that its estimates of the net proved reserves attributable to these properties, which represent 2.2 percent of PEP’s reserves on a net oil equivalent basis, are as follows, expressed in millions of barrels (MMbbl), billions of cubic feet (Bcf), and millions of barrels of oil equivalent (MMboe):

	Estimated by PEP Net Proved Reserves as of January 1, 2016					
	Oil (MMbbl)	Marketable Gas (Bcf)	Sales Gas (Bcf)	Condensate (MMbbl)	NGL (MMbbl)	Oil Equivalent (MMboe)
<b>Properties Reviewed by DeGolyer and MacNaughton</b>						
Burgos Area						
<b>Total Proved</b>	<b>4.0</b>	<b>1,020.3</b>	<b>910.6</b>	<b>12.6</b>	<b>18.8</b>	<b>210.5</b>

- Notes:
- 1. Oil equivalent is calculated based on oil, marketable gas, and condensate quantities.
  - 2. Marketable gas is converted to oil equivalent on a field-by-field basis using an energy equivalent factor reflecting the reservoir gas composition of each field.

In our opinion, the information relating to estimated proved reserves of oil, condensate, natural gas liquids, and gas contained in this report has been prepared in accordance with Paragraphs 932-235-50-4, 932-235-50-6, 932-235-50-7, and 932-235-50-9 of the Accounting Standards Update 932-235-50, *Extractive Industries – Oil and Gas (Topic 932): Oil and Gas Reserve Estimation and Disclosures* (January 2010) of the Financial Accounting Standards Board and Rules 4–10(a) (1)–(32) of Regulation S–X and Rules 302(b), 1201, and 1202(a) (1), (2), (3), (4), (8) of Regulation S–K of the Securities and Exchange Commission; provided, however, that estimates of proved developed and proved undeveloped reserves are not presented at the beginning of the year.

To the extent the above-enumerated rules, regulations, and statements require determinations of an accounting or legal nature, we, as engineers, are necessarily unable to express an opinion as to whether the above-described information is in accordance therewith or sufficient therefor.

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In comparing the detailed net proved reserves estimates prepared by us and by PEP, we have found differences, both positive and negative, resulting in an aggregate difference of 8.98 percent when compared on the basis of net oil equivalent barrels. It is our opinion that the net proved reserves estimates prepared by PEP on the properties reviewed by us and referred to above, when compared on the basis of net oil equivalent barrels, in aggregate, are considered reasonable.

DeGolyer and MacNaughton is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1936. DeGolyer and MacNaughton does not have any financial interest, including stock ownership, in PEP. Our fees were not contingent on the results of our evaluation. This letter report has been prepared at the request of PEP. DeGolyer and MacNaughton has used all assumptions, data, procedures, and methods that it considers necessary and appropriate to prepare this report.

Submitted,  
**C-0030, Pemex Form 20-F (Dec. 31, 2015)**

*DeGolyer and MacNaughton*

DeGOLYER and MacNAUGHTON  
Texas Registered Engineering Firm F-716



*Thomas C. Pence, P.E.*

Thomas C. Pence, P.E.  
Senior Vice President  
DeGolyer and MacNaughton

DEGOLYER AND MACNAUGHTON

**CERTIFICATE of QUALIFICATION**

I, Thomas C. Pence, Petroleum Engineer with DeGolyer and MacNaughton, 5001 Spring Valley Road, Suite 800 East, Dallas, Texas, 75244 U.S.A., hereby certify:

1. That I am a Senior Vice President of DeGolyer and MacNaughton, which company did prepare the letter report addressed to PEP dated April 29, 2016, and that I, as Senior Vice President, was responsible for the preparation of this letter report.
2. That I attended Texas A&M University, and that I graduated with a Bachelor of Science degree in Petroleum Engineering in 1982; that I am a Registered Professional Engineer in the State of Texas; that I am a member of the International Society of Petroleum Engineers and that I have in excess of 33 years of experience in oil and gas reservoir studies and reserves evaluations.



A handwritten signature in black ink, appearing to read "T. Pence, P.E.", written over a horizontal line.

Thomas C. Pence, P.E.  
Senior Vice President  
DeGolyer and MacNaughton

**Exhibit 10.6 (2 of 2)**

DEGOLYER AND MACNAUGHTON  
5001 SPRING VALLEY ROAD  
SUITE 800 EAST  
DALLAS, TEXAS 75244

This is a digital representation of a DeGolyer and MacNaughton report.

This file is intended to be a manifestation of certain data in the subject report and as such are subject to the same conditions thereof. The information and data contained in this file may be subject to misinterpretation; therefore, the signed and bound copy of this report should be considered the only authoritative source of such information.





DEGOLYER AND MACNAUGHTON  
5001 SPRING VALLEY ROAD  
SUITE 800 EAST  
DALLAS, TEXAS 75244

April 29, 2016

Mr. J. Javier Hinojosa Puebla  
Director Ejecutivo  
PEMEX Exploración y Producción  
Avenida Marina Nacional No. 329  
Torre Ejecutiva  
Colonia Verónica Anzures  
11300 Ciudad de México, México

Dear Mr. Hinojosa Puebla:

Pursuant to your request, we have conducted a reserves audit of the net proved oil, gas, condensate, and oil equivalent reserves, as of January 1, 2016, of certain properties that PEMEX Exploración y Producción (PEP) has represented are owned by the United Mexican States in the Veracruz area of Mexico. This audit was completed on April 29, 2016. PEP has represented that these properties account for 1.6 percent on a net oil equivalent barrel basis of the net proved reserves assigned to PEP, as of January 1, 2016, and that the net proved reserves estimates have been prepared in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the Securities and Exchange Commission (SEC) of the United States. At the request of PEP, we have also included in this report estimates prepared by PEP of its natural gas liquids (NGL) reserves; however, PEP has represented that PEP’s management of the properties stops at the inlet of the gas processing plants. PEP has represented that all subsurface hydrocarbons belong to the United Mexican States, and has further represented that PEP has received a 100-percent assignment in these properties by the United Mexican States; therefore, gross reserves are equal to net reserves and are defined as the total estimated petroleum to be produced from these properties after December 31, 2015. We have reviewed information provided to us by PEP that it represents to be PEP’s estimates of the net reserves, as of January 1, 2016, for the same properties as those which we audited. This report was prepared in accordance with guidelines specified in Item 1202 (a)(8) of Regulation S–K and is to be used for inclusion in certain SEC filings by PEP.

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**

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Based on Mexico’s Energy Reform of 2014, PEP has represented that its estimates of the net proved reserves assigned to PEP presented in this report correspond to 96.4 percent of the total net proved reserves of the Veracruz area assigned to PEP, on an oil equivalent basis.

Reserves estimates included herein are expressed as net reserves as represented by PEP. Gross reserves are defined as the total estimated petroleum to be produced from these properties after December 31, 2015. Net reserves are defined as that portion of the gross reserves attributable to the interests owned by the United Mexican States after deducting all interests owned by others.

Estimates of oil, gas, condensate, NGL, and oil equivalent reserves should be regarded only as estimates that may change as further production history and additional information become available. Not only are such reserves estimates based on that information which is currently available, but such estimates are also subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

Data used in this audit were obtained from reviews with PEP personnel, from PEP files, from records on file with the appropriate regulatory agencies, and from public sources. In the preparation of this report we have relied, without independent verification, upon such information furnished by PEP with respect to property interests, production from such properties, current costs of operation and development, current prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. A field examination of the properties was not considered necessary for the purposes of this report.

**Methodology and Procedures**

Estimates of reserves were prepared by the use of appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with practices generally recognized by the petroleum industry as presented in the publication of the Society of Petroleum Engineers entitled “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (Revision as of February 19, 2007).” The method or combination of methods used in the analysis of each reservoir was tempered by experience with similar reservoirs, stage of development, quality and completeness of basic data, and production history.

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Based on the current stage of field development, production performance, the development plans provided by PEP, and the analyses of areas offsetting existing wells with test or production data, reserves were classified as proved.

When applicable, the volumetric method was used to estimate the original oil in place (OOIP) and the original gas in place (OGIP). Structure and isopach maps were constructed to estimate reservoir

volume. Electrical logs, radioactivity logs, core analyses, and other available data were used to prepare these maps as well as to estimate representative values for porosity and water saturation. When adequate data were available and when circumstances justified, material balance and other engineering methods were used to estimate OOIP or OGIP.

Estimates of ultimate recovery were obtained after applying recovery factors to OOIP or OGIP. These recovery factors were based on consideration of the type of energy inherent in the reservoirs, analyses of the petroleum, the structural positions of the properties, and the production histories. When applicable, material balance and other engineering methods were used to estimate recovery factors. In such cases, an analysis of reservoir performance, including production rate, reservoir pressure, and gas-oil ratio behavior, was used in the estimation of reserves.

For depletion-type reservoirs or those whose performance disclosed a reliable decline in producing-rate trends or other diagnostic characteristics, reserves were estimated by the application of appropriate decline curves or other performance relationships. In the analyses of production-decline curves, reserves were estimated only to the limits of economic production or to the limit of the production licenses as appropriate.

Gas quantities estimated herein are expressed as marketable gas and sales gas at a temperature base of 20 degrees Celsius (°C) and at a pressure base of 1 atmosphere. Marketable gas is defined as the total gas in the reservoirs to be produced after shrinkage resulting from field separation and flare. Marketable gas includes fuel. Sales gas is defined as the total gas to be produced from the reservoirs, measured at the point of delivery, after reduction for injection, fuel usage, flare, and shrinkage resulting from field separation and plant processing. Oil, condensate, and NGL reserves estimated herein are expressed in terms of 42 United States gallons per barrel. Oil and condensate reserves estimated herein are to be recovered by

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normal field separation. PEP has represented that its NGL reserves have been estimated on the basis of the quantities of liquids recovered from gas delivered to a gas plant for processing, and can include propane, butane, and C<sub>5+</sub> fractions.

**Definition of Reserves**

Petroleum reserves estimated by PEP included in this report are classified as proved. Only proved reserves have been evaluated for this report. Reserves classifications used by PEP in this report are in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the SEC. Reserves are judged to be economically producible in future years from known reservoirs under existing economic and operating conditions and assuming continuation of current regulatory practices using conventional production methods and equipment. In the analyses of production-decline curves, reserves were estimated only to the limit of economic rates of production under existing economic and operating conditions using prices and costs consistent with the effective date of this report, including consideration of changes in existing prices provided only by contractual arrangements but not including escalations based upon future conditions. The petroleum reserves are classified as follows:

*Proved oil and gas reserves* – Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with

reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.

- (i) The area of the reservoir considered as proved includes:
  - (A) The area identified by drilling and limited by fluid contacts, if any, and
  - (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.

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- (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
- (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.
- (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
  - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and
  - (B) The project has been approved for development by all necessary parties and entities, including governmental entities.
- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.

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*Developed oil and gas reserves* – Developed oil and gas reserves are reserves of any category that can be expected to be recovered:

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and
- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.

*Undeveloped oil and gas reserves* – Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances justify a longer time.
- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in [section 210.4–10 (a) Definitions], or by other evidence using reliable technology establishing reasonable certainty.

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**Primary Economic Assumptions**

The following economic assumptions were used for estimating existing and future prices and costs, expressed in United States dollars (U.S.\$):

*Oil and Condensate Prices*

PEP has represented that the oil and condensate prices were based on a reference price, calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, unless prices are defined by contractual arrangements. The average adjusted product prices were U.S.\$45.66 per barrel for oil and U.S.\$45.02 per barrel for condensate, and the prices were held constant thereafter. These prices were not escalated for inflation.

Gas Prices

PEP has represented that the gas prices were based on a 12 month average price, calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, unless prices are defined by contractual arrangements. Each field’s calorific value, which includes NGL, was used to determine each field’s gas price. The contract prices for the fields audited in this report varied between U.S.\$2.49 and U.S.\$3.99 per thousand cubic feet. These prices were not escalated for inflation.

Operating Expenses, Capital Costs, and Abandonment Costs

Operating expenses and capital costs, based on information provided by PEP, were used in estimating future costs required to operate the properties. In certain cases, future costs, either higher or lower than existing costs, may have been used because of anticipated changes in operating conditions. These costs were not escalated for inflation. Abandonment costs were provided by PEP.

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While the oil and gas industry may be subject to regulatory changes from time to time that could affect an industry participant’s ability to recover its oil and gas reserves, we are not aware of any such governmental actions which would restrict the recovery of the January 1, 2016, estimated oil, gas, condensate, and NGL reserves.

PEP has represented that its estimated net proved reserves attributable to the reviewed properties are based on the definition of proved reserves of the SEC. PEP represents that its estimates of the net proved reserves attributable to these properties, which represent 1.6 percent of PEP’s reserves on a net oil equivalent basis, are as follows, expressed in millions of barrels (MMbbl), billions of cubic feet (Bcf), and millions of barrels of oil equivalent (MMboe):

		Estimated by PEP Net Proved Reserves as of January 1, 2016				
Oil (MMbbl)	Marketable Gas (Bcf)	Sales Gas (Bcf)	Condensate (MMbbl)	NGL (MMbbl)	Oil Equivalent (MMboe)	
Properties Reviewed by DeGolyer and MacNaughton						
Veracruz Area						
Total Proved	51.8	493.3	474.6	1.1	5.7	149.8

- Notes:
- 1. Oil equivalent is calculated based on oil, marketable gas, and condensate quantities.
  - 2. Marketable gas is converted to oil equivalent on a field-by-field basis using an energy equivalent factor reflecting the reservoir gas composition of each field.

In our opinion, the information relating to estimated proved reserves of oil, condensate, natural gas liquids, and gas contained in this report has been prepared in accordance with Paragraphs 932-235-50-4, 932-235-50-6, 932-235-50-7, and 932-235-50-9 of the Accounting Standards Update 932-235-50,

*Extractive Industries – Oil and Gas (Topic 932): Oil and Gas Reserve Estimation and Disclosures* (January 2010) of the Financial Accounting Standards Board and Rules 4–10(a) (1)–(32) of Regulation S–X and Rules 302(b), 1201, and 1202(a) (1), (2), (3), (4), (8) of Regulation S–K of the Securities and Exchange Commission; provided, however, that estimates of proved developed and proved undeveloped reserves are not presented at the beginning of the year.

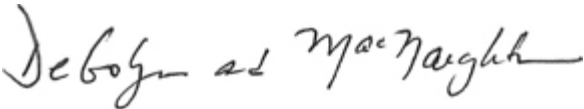
To the extent the above-enumerated rules, regulations, and statements require determinations of an accounting or legal nature, we, as engineers, are necessarily unable to express an opinion as to whether the above-described information is in accordance therewith or sufficient therefor.

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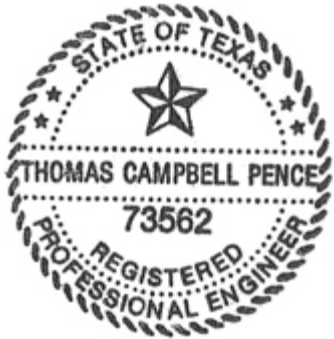
In comparing the detailed net proved reserves estimates prepared by us and by PEP, we have found differences, both positive and negative, resulting in an aggregate difference of 3.34 percent when compared on the basis of net oil equivalent barrels. It is our opinion that the net proved reserves estimates prepared by PEP on the properties reviewed by us and referred to above, when compared on the basis of net oil equivalent barrels, in aggregate, do not differ materially from those prepared by us.

DeGolyer and MacNaughton is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1936. DeGolyer and MacNaughton does not have any financial interest, including stock ownership, in PEP. Our fees were not contingent on the results of our evaluation. This letter report has been prepared at the request of PEP. DeGolyer and MacNaughton has used all assumptions, data, procedures, and methods that it considers necessary and appropriate to prepare this report.

Submitted,



DeGOLYER and MacNAUGHTON  
Texas Registered Engineering Firm F-716



Thomas C. Pence, P.E.  
Senior Vice President

**C-0030, Pemex Form 20-F (Dec. 31, 2015)**

DEGOLYER AND MACNAUGHTON

**CERTIFICATE of QUALIFICATION**

I, Thomas C. Pence, Petroleum Engineer with DeGolyer and MacNaughton, 5001 Spring Valley Road, Suite 800 East, Dallas, Texas, 75244 U.S.A., hereby certify:

1. That I am a Senior Vice President of DeGolyer and MacNaughton, which company did prepare the letter report addressed to PEP dated April 29, 2016, and that I, as Senior Vice President, was responsible for the preparation of this letter report.
2. That I attended Texas A&M University, and that I graduated with a Bachelor of Science degree in Petroleum Engineering in 1982; that I am a Registered Professional Engineer in the State of Texas; that I am a member of the International Society of Petroleum Engineers and that I have in excess of 33 years of experience in oil and gas reservoir studies and reserves evaluations.



A handwritten signature in black ink, appearing to read "Thomas C. Pence, P.E.", written over a horizontal line.

Thomas C. Pence, P.E.  
Senior Vice President  
DeGolyer and MacNaughton



CERTIFICATION

I, José Antonio González Anaya, certify that:

- 1. I have reviewed this annual report on Form 20-F of Petróleos Mexicanos;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
- 4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
- 5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent function):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: May 16, 2016

By: /s/ JOSÉ ANTONIO GONZÁLEZ ANAYA  
Name: José Antonio González Anaya  
Title: Chief Executive Officer/Director General

CERTIFICATION

I, Juan Pablo Newman Aguilar, certify that:

- 1. I have reviewed this annual report on Form 20-F of Petróleos Mexicanos;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
- 4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
- 5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent function):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: May 16, 2016

By: /S/ JUAN PABLO NEWMAN AGUILAR  
Name: Juan Pablo Newman Aguilar  
Title: Chief Financial Officer/Corporate Director of Finance

**Certification**  
**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**  
**(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)**

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Petróleos Mexicanos, a productive state owned company of the Federal Government of the United Mexican States (the “Company”), does hereby certify, to such officer’s knowledge, that:

The Annual Report on Form 20-F for the year ended December 31, 2015 (the “Form 20-F”) of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 20-F fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 16, 2016

By: /S/ JOSÉ ANTONIO GONZÁLEZ ANAYA  
Name: José Antonio González Anaya  
Title: Chief Executive Officer/Director General

Date: May 16, 2016

By: /S/ JUAN PABLO NEWMAN AGUILAR  
Name: Juan Pablo Newman Aguilar  
Title: Chief Financial Officer/Corporate Director of Finance